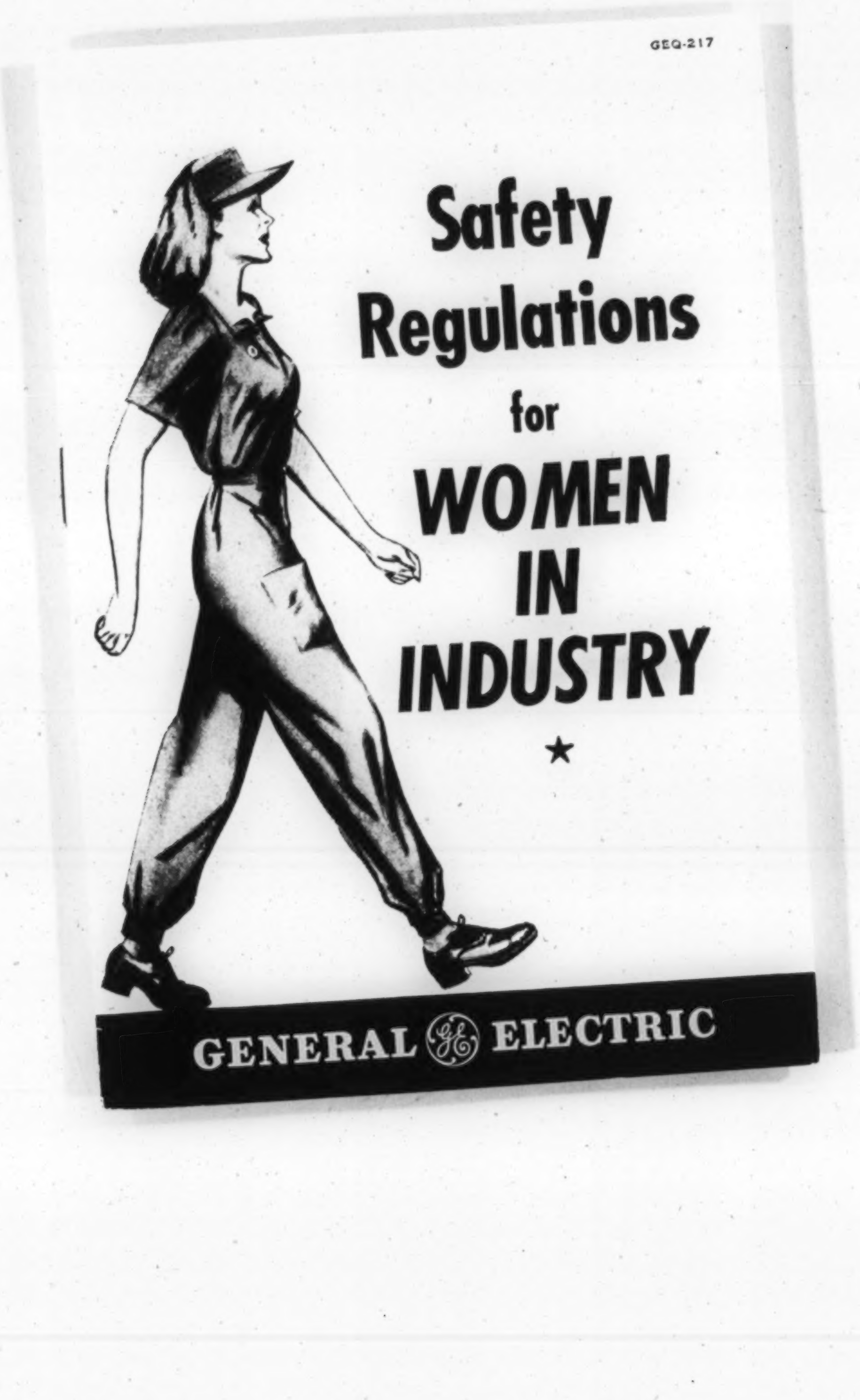


GEQ-217

Safety Regulations for WOMEN IN INDUSTRY

★

GENERAL ELECTRIC

Women are meeting the opportunity to serve their country, in the struggle to preserve their rights and privileges as mothers and homemakers, with courage, determination, and vigor. Women will stand guard against accidents and continue to serve their country.

★

SAFETY IS THE INSURANCE ***that pays most, costs least, and is paid to YOU!***

●

THE PREMIUM YOU PAY ***is unrelenting vigilance, constant caution, timely forethought, use of safety appliances and safety methods.***

★

Safety Regulations For Women in Industry

The purpose of this pamphlet is to help protect our women employees from the hazards of the shop and also to inform them of safe practices which are especially important.

Your personal caution is of great value. Armed with the knowledge of what to do and what not to do, you will be better prepared to take your place in industry.

Many accidents are caused by sending the mind out to play or dream while the body is at work. Therefore, the first requisite is to concentrate on your job, to do it properly and safely. If there is any question about how to do the job or how to prevent injury, consult your supervisor without delay.

Safety depends on

- how surely you recognize the hazards of your work,
- how faithfully you utilize the precautions for your safety,
- how consistently you exercise thoughtfulness and carefulness,
- how fully you recognize the fact that the safe way is the best way,
- how thoughtful you are of others as well as of yourself.

Statistics have proved that working in a factory is safer than being home or being on the highway. More accidents occur outside of the shop than inside. Our Company does everything possible to protect its employees, and we merely ask you to follow the practices which have been proven to be best by past experience.

Safe, Comfortable, Good-looking Clothing

Standard shop clothing has been accepted for use in our shops. When working on or around equipment with revolving parts, short sleeves should be used, and loose-fitting or flowing clothing of any sort should be avoided. Sweaters and clothes with long sleeves, or sleeves rolled above the elbow, causing a bunch, catch very easily in the machines, and therefore are not permitted.

Hair Protection

Women who work on or around rotating machines must have their hair protected by substantial, approved hair covering. All hair, front, side, and back, must be tucked within the protective head covering.

Safe Shoes

Women who enter the work areas in the shops must have completely closed substantial shoes, with heels not higher than Cuban, and strong soles. Safety shoes, which have a protective tip and which meet our requirements, are recommended.

Source of Clothing

Information and arrangements regarding the purchase of shop clothing, hair coverings, and safe shoes may be obtained from your supervisor or the Personnel Department.

Gloves and Jewelry

The use of gloves may be necessary on some operations, but they must never be worn by operators on lathes, boring mills, drill presses, milling machines, saws, or where revolving spindles or cutting tools are operating. Gloves are likely to catch on revolving tools and pull the hand into the danger zone, causing serious injury.

Rings, wristwatches, bracelets, pendants, or other jewelry should not be worn when doing work on the above types of machines.

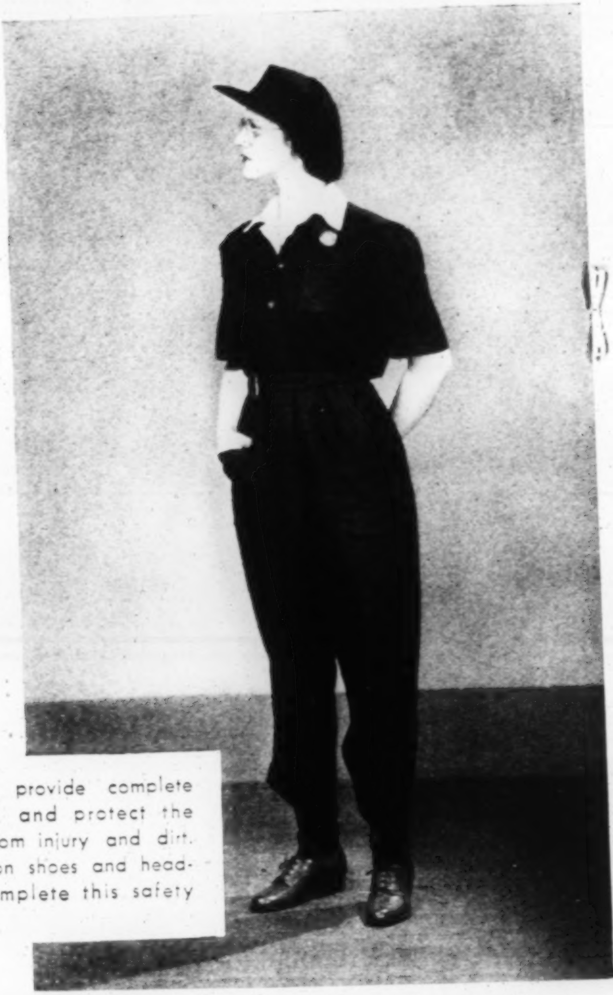
Goggles and Eye Shields

Many eyes have been saved by protecting them with goggles and eye shields which are furnished employees. Your supervisor will arrange to supply you with suitable protection, but you must do your part. See your supervisor about the correct way of protecting your eyes.

Face Shields

Face shields are of value only when there is no possibility of a severe blow, as in spot welding, pouring liquids, etc.

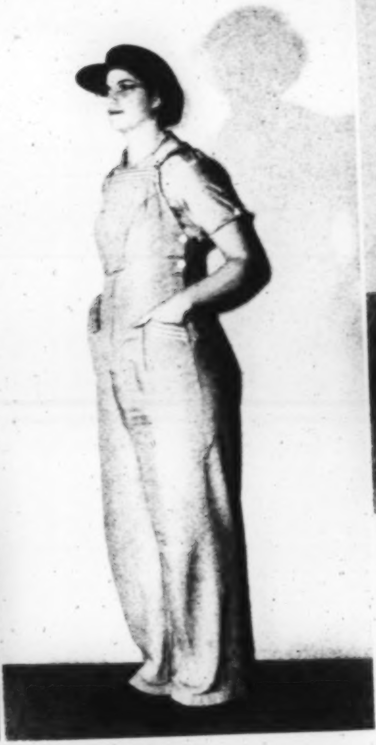
APPROVED SAFETY DRESS

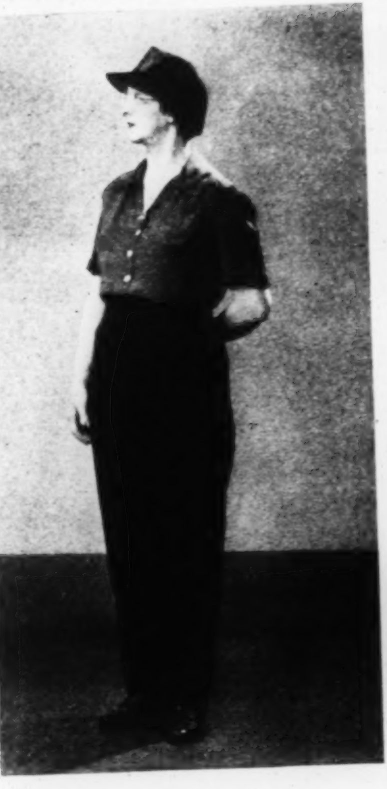


Coveralls provide complete covering and protect the wearer from injury and dirt. Regulation shoes and headgear complete this safety costume.

FOR WOMEN IN INDUSTRY

Denim bib-overalls also protect the wearer from dirt and moving machinery. With the overalls may be worn a short-sleeved blouse or shirt regulation safety shoes and headgear.





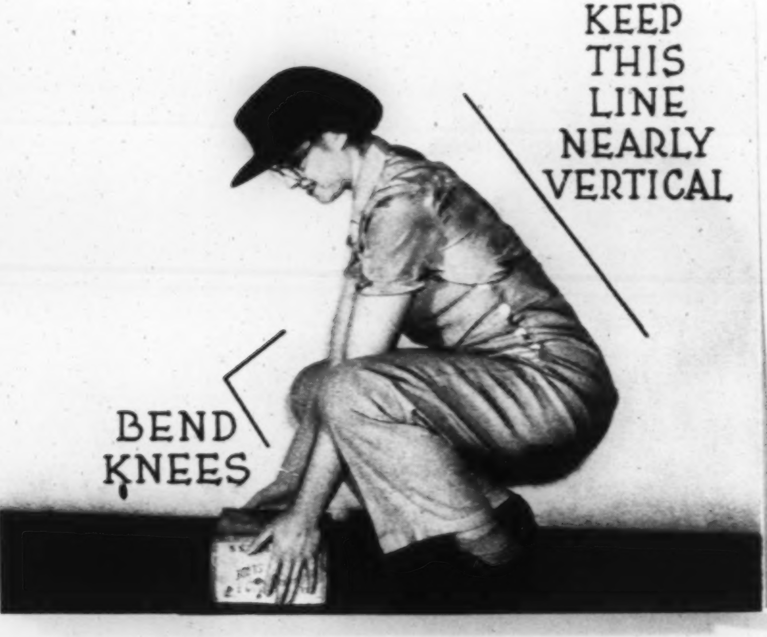
Lightweight slacks with a short-sleeved sport shirt or blouse and safety headgear are another example of approved safety costume.

Here Are Some Pointers—

1. Never reach through or over machines so that revolving or cutting parts may touch your clothes or body.

2. Keep your fingers away from the point of machine operations by using such approved devices as push sticks, hooks, or pliers. When removing chips, shavings, or other material from work, use brush, hooks, or special tools.

3. Learn to lift loads the right way—knees bent, back straight. Use the leg, not the back muscles.


KEEP THIS LINE NEARLY VERTICAL
BEND KNEES

4. Do not force drill presses, reamers, or other machines by exerting too much pressure on the feed lever. If this is done, tools may snap or break, and you may be injured.

5. When drilling, tapping, burring, or reaming material, see that it is securely fastened by blocks or clamps, so that it cannot spin or climb the drill. In no case should an operator rely on her hands to prevent the material from turning.

6. Be sure that hand tools are used in such a way that, should they slip, they will not injure you.

7. All files with tangs must be provided with handles when in use. Files must never be used as chisels, punches, or drifts.

8. Apply a wrench in the right way, so that the jaws do not spread. Use the right size to fit the nut so that it will not slip. Do not use a wrench as a hammer. Stand to one side when pulling down on wrenches above your head.

9. Compressed air is hazardous if improperly used. Consult your supervisor on how to use it.

10. You must not remove or make ineffective any safeguard.

11. When on a ladder, do not overreach.

12. All steps and stairs are dangerous unless properly used. Never run up or down stairs. WATCH your step.

13. If there is any question regarding your machine or tools, consult your supervisor immediately.

14. Every employee should take pride in his or her work place, machine, or bench. Clean, orderly, and sanitary work places are conducive to safety and pleasant in which to work.

15. Your personal help in keeping drinking fountains, toilets, and wash rooms clean and sanitary is vital to the safety and health of all employees. Observe rules of decency.

16. Lunches should neither be kept nor eaten in the immediate vicinity of such processes as plating, acid and alkali dipping, sand blasting, buffing, lacquering, lead operations, painting, galvanizing, alloy casting, or others where injurious materials or gases are present.

17. If you are injured in any way, no matter how slightly, go at once to the dispensary. Remember that unattended minor injuries may result in infection and time lost at work.

The above regulations and suggestions on safety are for *your* welfare and safety.

For more complete information, read your Red Book of "Safety Instructions and Information," GEQ-60A. If you haven't one, ask your foreman. He has a free copy for you.

Other pamphlets have been issued covering specific operations. Ask your foreman if there is one pertaining to your job.

★

If you don't know the safe way—stop and find out. It's a lot easier to do things right than wrong, and a lot safer.

★

★ TALK

★ WALK

★ LIVE

SAFELY

8-63 (75M)
Filing No. 215

Fitzgerald - Labor 24

OFFICE OF WAR INFORMATION
DEPARTMENT OF LABOR

For Immediate Release
Monday, January 25, 1943

OWI-1150

Wear safety caps when the job requires it, the United States Women's Bureau advises women war workers. Hair should be fully tucked under the cap, and so avoid scalping and other injuries as well as pain, costly medical care, permanent disfigurement.

This advice to women in war plants is given by Mary Anderson, Director of The Women's Bureau, United States Department of Labor, in a recent bulletin, the ninth in a series of pamphlets on standards for employment of women in war industries. It offers the following suggestions:

The feminine hairdo and machinery are a bad combination, if stray curls or wisps of hair are caught in moving parts. For machine operators the uncovered head should be taboo, also the popular bandana and turban as their loose ends may catch in the machine. A hairnet alone is not safe, but may help if worn under a good cap.

The formula for a safe cap calls for height, stiffness, and generous head siz Height warns the girl when her head gets dangerously near machinery. Stiffness pr vents the material from catching in the machine. The hat with a generous head si will be thrown off it it strikes a machine part.

Electric and acetylene welders should wear fire-proof hair covering to prevent serious burns.

Women exposed to dust or fumes need covering to protect the hair and to prevent its carrying toxic material. For this purpose, when there is no machine danger, a closely woven washable turban is good.

Workers exposed to oil or grease also need to protect the hair and thereby aid in preventing skin infections.

Half the enforcement battle is won if caps are comfortable, attractive, and introduced by persuasion rather than compulsion.

Vigilance must not be relaxed, the bulletin warns. Due to negligence, the following typical accidents occurred to women in war plants:

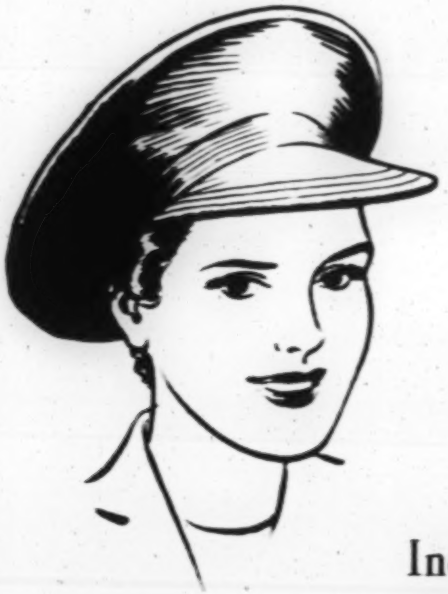
An operator of a spinning frame in bending over the machine had her hair caught. As a result of her injury she was totally disabled for 16 weeks, and partially disabled for 45 weeks longer. The injury cost was $570 in compensation.

In an ordnance plant a woman operating a barrel-turning machine leaned too close and her hair was pulled around the barrel. A large clump of hair was torn from her head. She spent days in the hospital recovering from the wound and shock.

The bulletin can be obtained by writing to the Women's Bureau, United States Department of Labor, and giving reasons for its need, or can be purchased for five cents from the Superintendent of Documents, Washington, D. C.

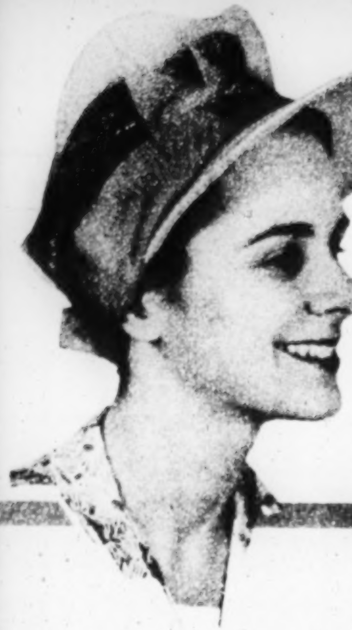
X-9179

SAFETY CAPS
FOR *Women* MACHINE OPERATORS

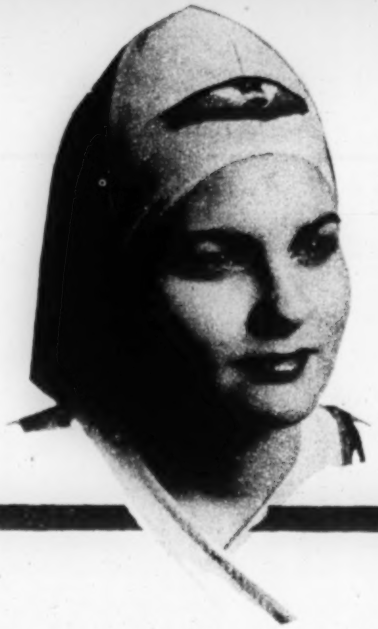


Industrial accidents are one of the potential bottlenecks in war production. Women war workers can help to eliminate this bottleneck by wearing safety clothing. Here are 12 work caps for women on machine operations—all of which meet most of the standards for protection.

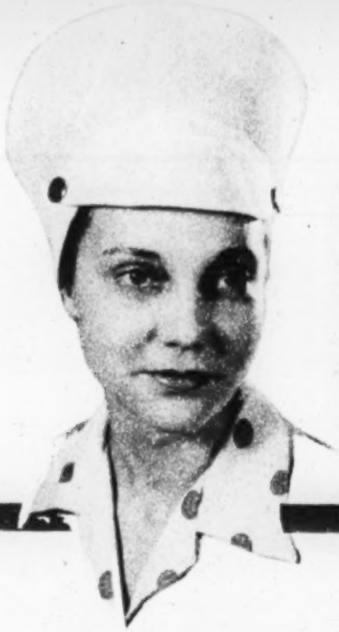
THE WOMEN'S BUREAU ★ U. S. DEPARTMENT OF LABOR
SUPPLEMENT TO SPECIAL BULLETIN NO. 9



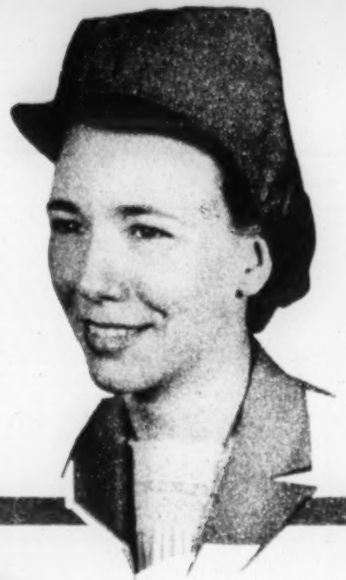
1 Washable plastic mesh, with high crown and broad visor. Cool and lightweight.



2 Rayon jersey cap worn with visored helmet in clear plastic; also in dark green to protect from light glare.

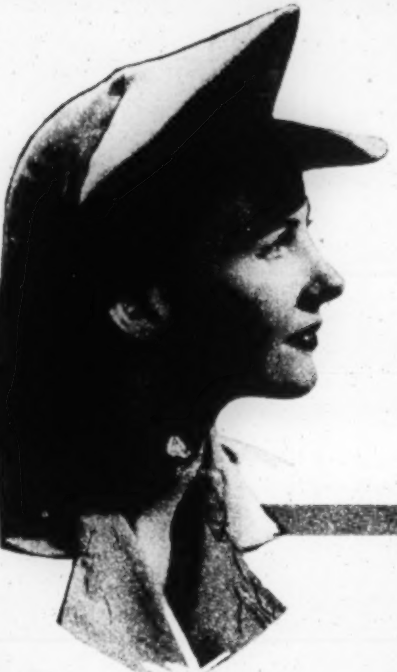


3 Buckram with stiff crown and visor. Adjustable by means of metal clasps. Designed for large machine company.

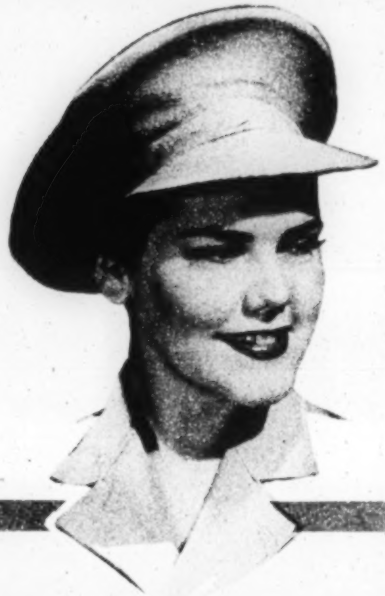


4 Cotton cloth with stitched and stiffened visor and crown front. Net panel for ventilation runs down back of crown and snood. Tape ties for drawstring. Washable.

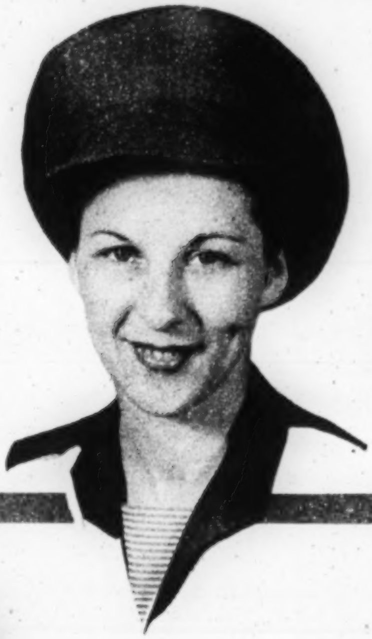
5 Twill or hopsacking. Washable and lightweight. Ventilated. Drawstring for adjustability.



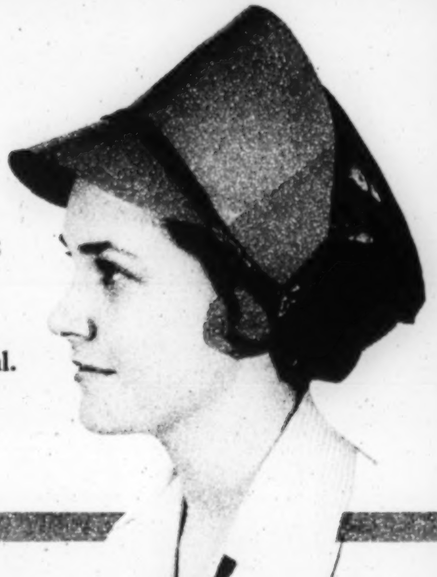
6 Peaked cap with drawstring crown. Lightweight cotton similar to hopsacking. Washable. Also in twill and poplin.

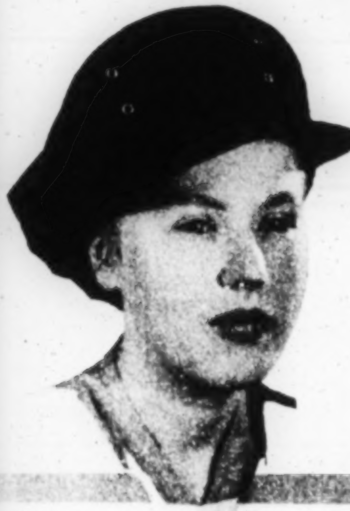


7 Washable sail-duck, drawstring snood and stitched visor. Hoop of stiff material inserted in crown and removable when cap itself is laundered.

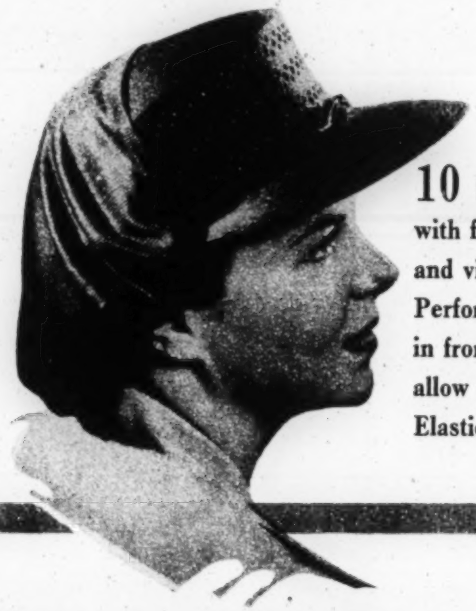


8 Visor and crown guard of plastic; snood and crown top of oil-, dust-, and moisture-proof material. Ear protectors are a special feature.

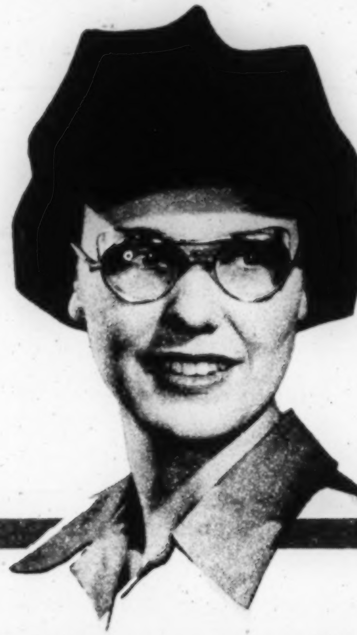




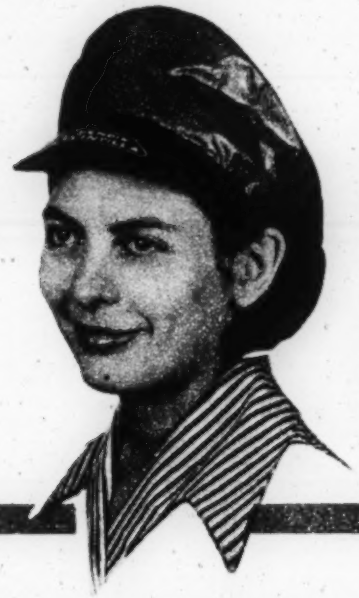
9 Net crown and snood, ventilated over visor. Washable, cool, and adjustable.



10 Snood of knitted rayon, with felt half crown and visor. Perforations in front of crown allow ventilation. Elastic cord in snood.



11 Cotton mesh, drawstring and visor. Cool, washable. Designed by safety division of airplane engine firm.



12 Plastic coated rayon with net snood and cellulose visor. Protects from grease and oil. Washable.

★ **Write to the Women's Bureau, U.S. Department of Labor, for manufacturers' names and prices of bulk lots**

☛ IT IS SUGGESTED THAT THIS FOLDER BE POSTED ON FACTORY BULLETIN BOARDS FOR THE INSTRUCTION OF WORKERS

The Women's Bureau of the United States Department of Labor has published three bulletins dealing with work clothing for women. These bulletins, as listed below, may be ordered from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

Effective Industrial Use of Women in the Defense Program
Special Bulletin No. 1, 1940, 10 cents

Safety Clothing for Women in Industry
Special Bulletin No. 3, 1941, 10 cents

Safety Caps for Women in War Factories
Special Bulletin No. 9, 1942, 5 cents

U. S. GOVERNMENT PRINTING OFFICE : 1943 O - 553056

work clothes

MVR

Ration - safety shoes

RO 17

AMENDMENT 5

MARCH 18, 1943

OFFICE OF WAR INFORMATION

OFFICE OF PRICE ADMINISTRATION

Advance Release: OPA-1969

For Thursday Afternoon Papers,
March 18, 1943.

Three modifications of Shoe Ration Order 17 were authorized today by the Office of Price Administration to care for certain specialized problems affecting consumers and the shoe trade. They are:

1. An additional ration for "safety" shoes, used for health protection in special work, may be acquired from his local Board by any person who has spent his ration Stamp 17, even though a member of his family has an unspent stamp;

2. Sandals which can be sold ration-free are re-defined to include all sandals with an open back and a heel height of 1⅛ inches or less, regardless of the material used in the upper; previously sandals could be sold ration-free only if their uppers were made entirely of fabric, imitation leather, sheepskin, cape or a combination of these materials;

3. Certain shoes with soles made principally of rope, wood, or other non-strategic materials may be sold ration-free, regardless of the material used in the upper, even if rubber or leather is used in the sole for features such as tabs or heel inserts which cover no more than 25% of the area of the bottom of the sole.

The last two modifications apply only to shoes completed, packaged and shipped from the factory before April 16, 1943.

Amendment No. 5 to Ration Order 17, effective March 24, 1943, simplies the rationing procedure for people who need "safety" shoes because of conditions under which they work. Such persons, after using their own No. 17 ration stamps, need not use any of their "family" stamps for safety shoes but may apply for the necessary extra ration at their local Boards.

Safety shoes are defined by the Amendment as meaning protective occupational shoes incorporating one or more of the following safety features: steel toe box, electrical conductivity, electrical resistance, non-sparking, and molders' (Congress type) protection (shoes which can be speedily removed, worn to protect against splashing metals).

The low-heel open back sandals and the shoes with rope, wooden, or other non-strategic soles now added to the "play shoe" group released from rationing include any shoes of these types, regardless of what material goes into the uppers. These types are being released to allow dealers to dispose of such footwear now in stock or in process of manufacture.

(Document No. 12653)

PART 1404—RATIONING OF FOOTWEAR

[Ration Order 17,[1] Amendment 5]

SHOES

A rationale accompanying this amendment, issued simultaneously herewith, has been filed with the Division of the Federal Register.*

Ration Order 17 is amended in the following respects:

1. The following sentence is added to section 1.5 (b):

However, an applicant applying for safety shoes required to protect his health or safety because of the conditions under which he works, may be found to have "need" for them even though a member of his family has a War Ration Shoe Stamp which the applicant could use.

2. Section 2.11 (a) (2) (viii) is amended to read as follows:

(viii) Shoes (sandals), other than imported huaraches, with a heel height of 1⅛ inches or less with an open back;

3. Section 2.11 (a) (2) (ix) is added to read as follows:

(ix) Shoes which have rubber or leather in the sole only as hinges, tabs, heel inserts or other non-skid or soundproofing features covering not more than 25 percent of the area of the bottom of the sole. (Any material may be used in other parts of the shoe.)

4. The definition of "safety shoes" is added in section 3.13 to read as follows:

"Safety shoes" means protective occupational shoes incorporating one or more of the following safety features: (1) steel toe box, (2) electrical conductivity, (3) electrical resistance, (4) nonsparking, (5) molders' (Congress type) protection.

This amendment shall become effective March 24, 1943.

(Pub. Law 671, 76th Cong. as amended by Pub. Laws 89, 421 and 507, 77th Cong.; W.P.B. Dir. 1, 7 F.R. 562, Supp. Dir. 1-T, 8 F.R. 1727; E.O. 9125, 7 F.R. 2719)

Issued this 18th day of March 1943.

PRENTISS M. BROWN,
Administrator.

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*Copies may be obtained from the Office of Price Administration.

[1] 8 F.R. 1727, 2040, 2487, 2943.

Work clothes

VERMONT

REGULATIONS AS TO CLOTHING FOR WOMEN WORKERS IN MACHINE TOOL AND FOUNDRY INDUSTRIES

Women workers in the foundry and machine tool industries are increasing in numbers quite rapidly, and inasmuch as they are now performing the work formerly open only to men, the type of clothing to be worn on the job has created a problem which can only be solved by the adoption of uniform regulations. These regulations are for the safety of women workers.

Working garments for women can be neat, attractive, and safe. Especially designed overalls, coveralls, slacks and shirts, with safety features incorporated in them, are available on the market and can be purchased through the employer.

Pursuant to statute, in such case made and provided, IT IS HEREBY ORDERED that the following are established as regulations as to clothing for women workers in machine tool and foundry industries

I. FOOT COVERING.
No open-toed shoes and no high-spike heels shall be worn on the job. The medium or flat type shoe heel is approved. Where the first aid director recommends safety shoes, they shall be worn on the job.

II. BODY CLOTHING.
The approved safety garment should be practical as well as safe and should consist either of slacks with shirts, or bib overalls with shirts, or coveralls. Such garments should have close-fitting necks, should be without trouser cuffs, and should have inserted pockets, not the patch type, where pockets are essential. Trousers should be close-fitting at ankles. The type and length of sleeves should fit the job being performed.

III. JEWELRY.
No jewelry should be worn while at work, such as wrist watches, rings, necklaces, bracelets, brooches, etc. Such objects might become caught in machinery or materials or may come in contact with charged electric conductors with resulting injuries and disfigurements.

IV. CAPS.
Caps with two inch to three inch visors known as Safety Caps should be worn. The visor prevents the head from too close proximity to the work, thereby preventing facial injuries or head accidents, and the cap itself is a much better protection than a hair net, especially around open fires or oil sprays.

This ORDER shall become effective February 1, 1943.

Dated at Montpelier, in the County of Washington, State of Vermont, this 24th day of December, 1942.

Howard E. Armstrong
Commissioner of Industrial Relations

U. S. Department of Labor
Women's Bureau
Washington

March 15, 1943.

Dear Friend:

The work of women will be a major factor in winning the present war ---- that is it will be, if we act wisely. The job of producing enough weapons and food to defeat our enemies will be a long, hard pull. Women are entering the mills and factories with enthusiasm and eager determination to do their share. They are filling some of the most exacting and painstaking jobs in all industry and they are working steadily and efficiently and producing the goods.

They will continue to do so, if we have the wisdom to insist that they be employed under conditions that will protect their health and preserve their strength. If we do not, we jeopardize our whole cause. Health will suffer, women will be forced to drop out of industry, production will fall off. Alarming disregard of the work standards that we know are essential to the protection of the health of women workers is being practiced in some quarters and advocated in others. This short-sighted policy must be checked. Our men at the front must have equipment, our women must help produce it. This they can do only if employed for hours that do not undermine their health and strength. Eight hours a day, six days a week under our mass production system is a long time to comply with the demands of a machine or factory. It is a period which should not be exceeded in the case of women workers, except when the pressing needs of our boys at the front make exceptions temporarily necessary.

As a result of the war, women workers are being drained from the service and other civilian industries. Labor is scarce and should be utilized where it is most urgently needed. Pleasure driving has been banned in order to conserve rubber and gasoline for the prosecution of the war. Precious labor now being used to provide peace-time comforts and luxuries for civilians will also have to be conserved. Certain it is that the health of women workers must not be sacrificed through the employment for long hours to provide the civilian population with nonessential, peace-time services, or to assure the continuance of business as usual.

These matters were seriously considered at a recent conference on the employment of women in wartime called by the Secretary of Labor. Resolutions expressing the conclusions of the conference on this important subject are attached. May I urge your support in promoting the observance of the standards embodied in these resolutions? The times are critical and the cooperation of all is required if labor standards necessary to women's health and the war production are to be maintained.

Sincerely yours,

Mary Anderson

Mary Anderson, Director.

Resolution Unanimously Adopted at Conference on Employment of Women in Wartime Called by Secretary of Labor

March 11 and 12, 1943

Whereas millions of women are being employed in industry today and millions more must be employed in the coming year if adequate materials to meet the needs of our armed forces are to be produced; and

Whereas the maximum output of women workers depends upon the maintenance of their efficiency and health; and

Whereas statistics show that sickness rates are much higher for women workers than for men; and

Whereas experience has proved that long hours and unwholesome working conditions constitute the main cause of sickness and absenteeism; and

Whereas this conference of commissioners and officials of State labor departments and the District of Columbia meeting together in Washington for two days, March 11 and 12, 1943, has considered means by which the employment in war and civilian industries may most effectively be utilized; and

Whereas representatives of the War and Navy Departments attending these meetings have testified to the necessity of maintaining reasonable hour standards incorporated in existing State legislation and have asked only that exceptions be made in emergencies created by the urgency of the war effort: Therefore be it

Resolved, That this conference go on record as continuing to endorse the standards of hours of employment which have been consistently adopted by conferences during the past year between State labor commissioners and representatives of the U. S. Departments of Labor, War, Navy, and other Federal agencies, namely:

The State laws and regulations embracing the following basic principles should be preserved except where modification may be necessary during the war period to insure maximum production:

1. A maximum 48-hour week.
2. An 8-hour day.
3. One day of rest in seven.
4. Adequate rest and meal periods.
5. Adaptation of hours of work and working conditions to the age and sex of the worker, except that there must be no relaxation or modification of standards governing the employment of minors under 16.
6. Proper safeguards for health and safety.
7. The same wage rates for women as for men.

Resolution Unanimously Adopted at Conference on Employment of Women in Wartime Called by Secretary of Labor

March 11 and 12, 1943

Whereas the health and well-being of women employed in civilian industries is as essential to our National wartime economy as is that of workers engaged in war industries; and

Whereas long hours and poor working conditions in civilian industries lead to sickness and absenteeism: Therefore be it

Resolved, That peacetime standards of hours and conditions of work be not relaxed in these industries in order to provide conveniences, goods, and services for war workers and civilians which in peacetime may be desirable but in time of war are not truly necessary to our well-being; and be it

Resolved further, That if, in order to provide for the basic subsistence needs of war workers and civilians, a relaxation of State labor laws may be necessary, such relaxation be granted only in those areas in which critical labor shortages exist; moreover, be it

Resolved further, That in such areas of extreme labor shortages relaxations be permitted only for the production of goods and services necessary to provide for the basic minimum subsistence needs of war workers and the civilian population, and that definite standards be established for determining the need for such relaxation.

MVR
your copy

RO 17
AMDT. 36
SEPT. 10, 1943

OFFICE OF WAR INFORMATION
OFFICE OF PRICE ADMINISTRATION

For Immediate Release: OPA 3049
Friday, September 10, 1943.

AMDT. 36 TO RO 17—SHOES

PRESS RELEASE

A special shoe stamp for the purchase of safety shoes issued by a War Price and Rationing Board or an industrial plant must be marked "Safety Shoes" and may be spent by the consumer only for the shoes specified, the Office of Price Administration announced today.

An amendment to the shoe ration order places this restriction on extra rations for safety shoes. Further, OPA District offices may authorize local boards to write on other special shoe stamps the purpose for which they are issued—such as "Men's Use," "Women's Use," or "Children's Use." In such cases the consumer may use a stamp only for the purpose indicated. However, only stamps issued for safety shoes are required to be marked.

Today's amendment also states that if a special stamp is issued on OPA Form R–1708A, a revision of the form heretofore in use, the issuing board, industrial plant, or retailer (in the case of retailers making refunds), shall write on it the date of its expiration for consumer use, which is 30 days after the date of issuance.

Supplies of the old form on hand (OPA–R–1708) must be used up before the new form is used, however. The old form will continue to bear the date of issuance, rather than the expiration date, and, like revised OPA–R–1708A, must be used by the consumer within 30 days. Notation of the end date involves no change in the stamp's validity period, either at retail, or for ration deposit or direct ordering within the shoe trade.

The provision in today's amendment that special shoe stamps for safety shoes, whether issued by a local board or an industrial plant, must be marked "Safety Shoes" will assure the use of these special stamps for the purpose for which they are intended. Since extra rations for such shoes are readily available to workers who need them, action is being taken to prevent use of the stamps for dress shoes or other types not in the occupational group.

Two additional changes affecting the issuance of stamps for safety shoes by industrial plants are made by the amendment. These are: (1) An agent appointed by an industrial plant to issue special shoe stamps must have no connection with the sale of the shoes; (2) the place where the stamps are issued must not be located in the part of the plant where safety shoes are sold. The main purpose of these provisions is to guard against a feeling by employees that they must buy safety shoes at a company store.

Special shoe stamps issued at industrial plants or by local boards may be used to buy safety shoes from any dealer. Retailers may accept these stamps only for delivery of occupational shoes incorporating one or more of the following protective features: steel toe box; electrical conductivity; electrical resistance; non-sparking; molders' (Congress type) protection, and women's shoes with plastic or fibre toe box. Dealers, however, may use the stamps to buy any types of rationed shoes from their suppliers.

Amendment 36 to Ration Order 17 (Shoes) is effective September 15, 1943.

REGULATION

(Document No. 20964)

PART 1404—RATIONING OF FOOTWEAR

[RO 17,[1] Amdt. 36]

SHOES

A rationale accompanying this amendment, issued simultaneously herewith, has been filed with the division of the Federal Register.*

Ration Order 17 is amended in the following respects:

1. Section 1.4b (c) is amended by adding to the end of the first sentence the following: "or, if OPA Form R–1708A is used, the date of the end of the valid period of the current War ration shoe stamp."

2. Section 1.5 (c) is amended to read as follows:

(c) If a special shoe stamp is issued, the Board will write on it the serial number of the applicant's War Ration Book then being used for shoes or, if the applicant has no book, the words "No book." If the application is for a stamp to secure safety shoes the words "Safety shoes" shall be written on the stamp. If OPA Form R–1708 is used, the Board shall write on it the date of its issue. If OPA Form R–1708A is used it shall write on it the date of its expiration for consumer use, which is 30 days after the date it is issued.

3. Section 1.6 is amended by deleting the first sentence and substituting instead the following:

A consumer who gets a special shoe stamp in a way permitted by this order may use it within 30 days from the date it was issued to get one pair of shoes. Where the use to which a special shoe stamp may be put is specified on the stamp, it shall not be valid for any other use by the consumer.

4. Section 1.7a (b) is amended by adding after the first sentence the following:

The person or committee so appointed shall have no connection with the sale of safety shoes and the place at which stamps are issued may not be in the same part of the plant as a location where safety shoes are sold.

5. Section 1.7a (b) is amended by deleting the second sentence and substituting instead the following:

When a stamp is issued to an employee by such person (or committee), he shall write on it the words "Safety shoes", and the number of the employee's war ration book or, if the employee does not have a war ration book, he shall write on it the words, "No book". If OPA Form R–1708 is used, he shall write on it the date of its issue. If OPA Form R–1708A is used, he shall write on it the date of its expiration for consumer use, which is 30 days after the date it is issued.

6. Section 1.10 (a) is amended to read as follows:

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*Copies may be obtained from the Office of Price Administration.

[1] 8 F.R. 1749, 2040, 2487, 2943, 3315, 3371, 3853, 4129, 3948, 4716, 5589, 5678, 5679, 5567, 5756, 6046, 6687, 7198, 7261, 8061, 8064, 8357, 8601, 9062, 9422, 9567, 9884, 10269, 10762, 11445, 11515.

(a) Any consumer may return new shoes to the establishment from which he got them and with the latter's consent may get another pair in exchange or may get back a special shoe stamp if the establishment accepts the shoes returned and also refunds the full purchase price. If the establishment gives him a special shoe stamp on OPA Form R–1708, it shall write on the stamp the date it is issued. If OPA Form R–1708A is used, the establishment shall write on the stamp the date of its expiration for consumer use, which is 30 days from the date it is issued.

7. Section 2.7 (a) is amended by adding before the last sentence the following:

Where the use to which a special shoe stamp may be put is specified on the stamp, it shall not be valid for any other use by the consumer.

8. Section 2.10 (a) is amended by deleting the third sentence and substituting instead the following:

If a stamp on OPA Form R–1708 is refunded, the establishment shall write on it the date it is issued. If OPA Form R–1708A is used, it shall write on the stamp the date of its expiration for consumer use, which is 30 days from the date it is issued.

This amendment shall become effective September 15, 1943.

(Pub. Law 671, 76th Cong., as amended by Pub. Laws 89, 421, and 507, 77th Cong.; WPB Directive 1, 7 F.R. 562, Supp. Directive 1–T, 8 F.R. 1727; E.O. 9125, 7 F.R. 2719)

Issued this 10th day of September 1943.

CHESTER BOWLES,
Acting Administrator.

1

MVR
your copy

The correct number is OPA-1881

RO 17
AMENDMENT 3
MARCH 8, 1943

OFFICE OF WAR INFORMATION
OFFICE OF PRICE ADMINISTRATION

For Immediate Release: **OPA-188**
Monday, March 8, 1943.

Persons requiring shoes for testing purposes were authorized today by the Office of Price Administration to acquire them without surrendering ration coupons by applying in writing to OPA in Washington.

By Amendment No. 3 to Ration Order 17, effective March 13, 1943, Certificates or Special Shoe Stamps may be issued to acquire shoes for this purpose upon such conditions as OPA may prescribe in individual cases.

The same amendment authorizes any branch of the armed services of the United Nations to secure Shoe Purchase Certificates from any District OPA Office to acquire the shoes it needs for members of its armed services in the United States. Shoes so acquired may be sold or furnished members of their armed services in this country without collecting ration currency.

This action also enables any branch of the armed services of the United Nations to secure the release from the Collector of Customs of shoes sent them from their native lands upon presentation of the necessary certificate.

(Document No. 11386)

PART 1404—RATIONING OF FOOTWEAR

[Ration Order 17,[1] Amendment 3]

SHOES

A rationale accompanying this amendment, issued simultaneously herewith, has been filed with the Division of the Federal Register.*

Ration Order 17 is amended in the following respects:

1. Section 1.14 (c) is added to read as follows:

(c) Any branch of the armed services of the United Nations may get certificates from any District Office to acquire the shoes it needs for members of its armed services within the United States and may furnish or sell shoes to any member of the armed services of the United Nations without collecting ration currency.

2. Section 2.19 is added to read as follows:

SEC. 2.19 *Shoes may be acquired for testing.* Any person who requires shoes for testing may apply to the Office of Price Administration, Washington, D. C., for the number of pairs of shoes needed. In a proper case, certificates or special shoe stamps may be issued to acquire shoes for this purpose, upon such conditions as the Office of Price Administration may prescribe.

This amendment shall become effective March 13, 1943.

(Pub. Law 671, 76th Cong. as amended by Pub. Laws 89, 421 and 507, 77th Cong.; W.P.B. Directive 1, 7 F.R. 562, Supplementary Directive 1-T, 8 F.R. 1727; E.O. 9125, 7 F.R. 2719)

Issued this 8th day of March 1943.

PRENTISS M. BROWN,
Administrator.

Work Clothing

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* Copies may be obtained from the Office of Price Administration.

[1] 8 F.R. 1749, 2040, 2487.

Davis-WMC-787

OFFICE OF WAR INFORMATION
WAR MANPOWER COMMISSION

For Immediate Release
Monday, January 4, 1943

PM-4271

A statement by Paul V. McNutt, Chairman of the War Manpower Commission, upon the National Safety Council's inauguration of the drive of the War Production Fund to Conserve Manpower:

Since Pearl Harbor more Americans have been lost to the war effort through accidents on the home front than have been killed, wounded or captured in military and naval operations. Announced casualties in the United States armed forces since Pearl Harbor have totalled 58,307 including those missing. Casualties to American workers through on and off-the-job accidents in the same period have numbered 46,300 dead, 4,000,000 injured.

This grim accident toll is a major handicap to stabilizing American manpower. As a waste of human life and material resources it is intolerable. We know that accidents can be prevented. We know that our supply of workers is so limited that we cannot afford to lose even one through accident. Wars cannot be won by armies with a "safety first" slogan. But the war can be lost on the home front without this slogan.

Today the safety engineering profession faces a tremendous accident-prevention task. Production rates have been stepped up enormously. An army of new workers eventually to total 20 millions, including unprecedented numbers of women, older men and youths, is settling down into new jobs. Plant expansion, the crowding of war production centers, the dearth of housing, war workers transportation difficulties, the fatigues of the swing shift -- all these factors contribute to the accident toll.

Several agencies of the government have been at work on the safety problem. The Division of Labor Standards of the Department of Labor through its establishment of the National Committee on the Conservation of Manpower in War Industries has done a great work in enrolling the help of hundreds of safety engineers. The Industrial Hygiene Division of the United States Public Health Service has dealt with those aspects of safety which relate to health and physical stamina. The Office of Defense Health and Welfare Service has worked for the coordination of governmental and community services concerned with the safety problems, but the government cannot do this job. It is a task for all industries and all labor and requires voluntary action.

The President has recognized the need for an expanded safety program. He has recognized the threat that accidents constitute to the effectiveness of America's manpower, and called some months ago upon the National Safety Council to aid in the mobilizing for a total war against accidents. In doing so, he paid tribute to the 31 years of experience in home traffic and industrial accident prevention.

(over)

To finance an expansion of National Safety Council facilities commensurate with the critical need, it was estimated that $5,000,000 would be needed. To raise this $5,000,000 by voluntary contribution from business and industry the War Production Fund to Conserve Manpower was organized by business and industrial leaders throughout the United States. William A. Irvin, former president of the U. S. Steel Corporation and himself a pioneer in industrial safety, was asked to devote his executive and technical experience to the Fund. He is now busy full time as national chairman.

The National Safety Council and the Fund correctly understood their wartime assignment as a responsibility to educate the public so that safety becomes a watchword and a patriotic duty. Their concurrent task is to put into action both broad and detailed technical plans for the immediate reduction of accidents, an administrative task that must be supported by popular understanding. Through a nation-wide network of committees this far-reaching operation is taking shape.

Already the Council has tackled problems of wartime accident-prevention. For the Maritime Commission, safety programs have been worked out for East, Gulf and West Coast shipyards. In co-operation with the safety and security branch of the Provost Marshall Ganeral's Office, the Council is training safety personnel for introduction into plants producing for the Army. In this regard it is notable that only one out of eight American industrial establishments is today protected by an all-around safety program. For the Labor Department and the U. S. Office of Education the Council has set up safety courses and provided instructors to teach these courses to future industrial safety men. High school boys are being trained in safe driving, in preparation for their induction into the Army or into war industry. Safety training courses are being made an integral part of courses given in vocational and engineering schools.

Plans for car-pooling, for the staggering of working-hours and for smooth traffic routing have been worked out by the Council, and are now in use in such mushroom military-industrial areas as the Rock Island Arsenal; Provo, Utah; Decatur, Illinois; Little Rock, Arkansas; Mobile, Alabama; and other areas. In all these places the Council is collaborating with the Army and the municipal and State authorities.

An over-all attack on the accident-problem, one that reaches outside the factor, is absolutely necessary since three out of five accidents happen off the job. All accidents -- the fatality or injury strikes the housewife and the child, as well as the steelworker and the miner -- have a powerful if not easily measurable effect on war time morale. It is important to note that the grand total of accidental deaths and injuries is just about double the toll on workers proper.

On the eve of a nation-wide tour by the Fund's national chairman, Mr. Irvin, of important war production centers to stimulate maximum accident-prevention, I wish to call on American business and industry for their enthusiastic support of the national safety movement. As chairman of the War Manpower Commission I feel that Mr. Irvin, the committees of the War Production Fund throughout the United States and the National Safety Council are to be congratulated for their timely contribution to the broad task of saving manpower for warpower. They are setting up an example of active civilian co-operation which is all - important in winning the war.

[illegible]
return to → Gordon

Nelly Don
ORIGINATES AND CREATES

Donnelly Garment Sales Company
1828 WALNUT STREET
Kansas City, Mo.

January 13, 1943

Miss Mary V. Robinson, Director
Division of Public Information
U. S. Department of Labor
Women'w Bureau
Washington, D. C.

Dear Miss Robinson:

Every industrial and war plant is facing, or soon must face, the problem of proper action clothing for its fast-growing army of women workers. We can be of real assistance to you in providing these employees with garments that are comfortable, which promote efficiency and yet lend the attractiveness that a woman demands of her clothing.

The attached "Action Clothes for American Women" is just off the press and illustrates and describes feminine work apparel up-to-the-minute from the standpoints of comfort, durability, attractiveness and safety. The Donalls(coveralls), Slack Suits and other types pictured represent 18 months of research as to the most practical uniforms and fabrics for working women and their styling and fit are the result of our more than a quarter century's experience in making the famous Nelly Don line of women's clothing. Because our work garments are made by women and modeled on women, they fit the feminine figure and this has a practical as well as an aesthetic value for well-fitting, comfortable garments do contribute to worker output.

In this new catalog, you will find several types of uniforms which would be adaptable to the needs of your women employees and they will be delighted with the sturdy, yet handsome, fabrics which are easily washed and ironed. Show this booklet to some of them and by their enthusiastic reaction you will understand why our garments have found ready acceptance from feminine workers in ordnance, aviation and general war and industrial plants throughout the country.

We will be glad to work with you upon your particular needs and hope you will write us for complete information with regards to women's work clothing.

Very truly yours,
DONNELLY GARMENT SALES COMPANY

George L. Fitzgerald

George L. Fitzgerald
Director Defense Contract Division

hp
encl.

American Air Lines, Inc., LaGuardia Field, New York
Feb. 4, 1943 Sent to Miss Anderson

Yesterday Miss Gooden asked for information regarding coveralls for all women employees in the shops, which I have secured. The garments are purchased from the Eastern Isles Importing Co. of Clinton, Mass., and the one-piece suits cost approximately $3.35 each. The material is Wellington Sears #S-1500 in colors, sand and gragreen. The turbans are about 45¢ each and made from Wellington Sears #S-1493 in colors , sand and gragreen.

These materials are of approximately the same texture and grade as are our coveralls for men, and we have reason to believe they should wear as well, if not better, assuming that they will not become as greasy or subjected to the same degree of abuse. In many instances our men's coveralls last as long as two years, and we estimate the average to be in excess of one year.

Received January 25, 1943

PAUL HATS
Incorporated
122 Gold Street
Worcester, Mass.

Industrial Plants which are Using Our Safety Work Caps

Plant	Location	
The Norton Company	Worcester,	Massachusetts
Wyman-Gordon Company	"	"
American Steel & Wire Company	"	"
Washburn Company	"	"
Wright Machine Company	"	"
Parker & Harper Mfg. Company	"	"
Rice-Barton Corporation	"	"
Leland-Gifford Company	"	"
Whitin Machine Works	Whitinsville	"
Springfield Arsenal	Springfield	"
Lapointe Machine Tool Company	Hudson	"
Universal Boring Machine Company	"	"
Johnson-Claflin Company	Marlborough	"
Worcester Taper Pin Company	Worcester, M	"

The caps supplied the above are numbers 004 and 007 which we sent you previously. Both styles have been re-ordered.

The new ventilated caps which we are sending you were just made and have not as yet been sold. The Sperry Gyroscope Company in Long Island requested samples of these caps and we have submitted to them a sample order for their experimenting.

Received January 25, 1943

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Townsell - Maritime - 60

MVR
your copy

OFFICE OF WAR INFORMATION
UNITED STATES MARITIME COMMISSION

For Immediate Release
Monday, March 1, 1943

OWI-1350
PR 1451

The woman shipyard worker, her hair confined under a bandana and topped by a large hard safety hat, dressed in a coverall garment fitting close at the wrists and ankles with nothing to catch in whirring mechanism, will be as safe from accident as a conference of shipyard safety experts can make her.

Representatives of 90 percent of the shipyards engaged in work for the United States Maritime Commission and the United States Navy, meeting in Chicago last December, drew up a set of standards covering clothing and protective devices for women shipyard workers which they believe will eliminate most of the safety hazards presented by women's conventional attire.

Beginning at the head, the conference recommended not only that the hazard of straggling hair drawing her head into moving machinery be eliminated, but that the safety hat be high enough to warn of closeby dangerous machinery, stiff enough not to catch in moving mechanism and large enough to fall off easily if struck by a moving part.

For protection of her eyes the conference recommended impact-resisting safety goggles with side shields where there is a hazard of flying objects, and goggles with tinted lenses to protect against the rays of welding arcs. Both should be of a type meeting approval of the U. S. Bureau of Standards. For certain operations it was suggested that a face mask of cellulose acetate and goggles may be worn. For women welders the conference advised the standard tilt welders type helmet, fastened to the safety hat and with the rest of the head protection in place. Tinted goggles are worn under the helmet.

A coverall uniform of any closely woven wool or cotton material of weight suitable for the type of work and the season, but styled to give ample room for action jobs was suggested by the conference. Plastic or metal buttons covered with flaps, cuffless sleeves and trousers with legs fastened at the ankles by a strap or button, all pockets flat but no breast pocket, flat seams, and a close fitting neck, make for a smooth surface that gives little chance for clothing to be caught in moving machines. Color is optional. Puff shoulders and extending collars or neck pieces are not permitted by the regulations. A belt may be used at the waist, provided its design is an integral part of the garment and has no free ends after fastening.

A woman welder's garment, the regulations say, should be a flame proofed coverall of the above description, or a two piece outfit of wool trousers and shirt plus a flame proofed welder's leather set.

Shoes for the women workers should be of the safety type and of the same rugged construction as those worn by men, the regulations conclude. Steel not plastic toe caps, low heels and leather or cord type soles and heels complete the shoe specifications which meet the recently adopted American Standard Code for safety shoes.

X-10995

Good article on
Women's Work Clothing
A.S.A. March 1943
See Margaret Mellert

Let us all throw the emphasis away from the small minority of absentees:

~~Let us stop stressing abs~~

Let us all talk less about absenteeism and more about presenteeism. Let us stress the fine ~~contribution~~ ~~performance of the~~ vast majority of our workers who ~~tend~~ serve ~~stick~~ as loyally and unflaggingly ~~to~~ ~~the~~ production lines as the soldiers on the battle ~~lines~~ fronts

Townsell - Maritime - 60

OFFICE OF WAR INFORMATION
UNITED STATES MARITIME COMMISSION

For Immediate Release
Monday, March 1, 1943

OWI-1358
PR 1451

The woman shipyard worker, her hair confined under a bandana and topped by a large hard safety hat, dressed in a coverall garment fitting close at the wrists and ankles with nothing to catch in whirring mechanism, will be as safe from accident as a conference of shipyard safety experts can make her.

Representatives of 90 percent of the shipyards engaged in work for the United States Maritime Commission and the United States Navy, meeting in Chicago last December, drew up a set of standards covering clothing and protective devices for women shipyard workers which they believe will eliminate most of the safety hazards presented by women's conventional attire.

Beginning at the head, the conference recommended not only that the hazard of straggling hair drawing her head into moving machinery be eliminated, but that the safety hat be high enough to warn of closeby dangerous machinery, stiff enough not to catch in moving mechanism and large enough to fall off easily if struck by a moving part.

For protection of her eyes the conference recommended impact-resisting safety goggles with side shields where there is a hazard of flying objects, and goggles with tinted lenses to protect against the rays of welding arcs. Both should be of a type meeting approval of the U. S. Bureau of Standards. For certain operations it was suggested that a face mask of cellulose acetate and goggles may be worn. For women welders the conference advised the standard tilt welders type helmet, fastened to the safety hat and with the rest of the head protection in place. Tinted goggles are worn under the helmet.

A coverall uniform of any closely woven wool or cotton material of weight suitable for the type of work and the season, but styled to give ample room for action jobs was suggested by the conference. Plastic or metal buttons covered with flaps, cuffless sleeves and trousers with legs fastened at the ankles by a strap or button, all pockets flat but no breast pocket, flat seams, and a close fitting neck, make for a smooth surface that gives little chance for clothing to be caught in moving machines. Color is optional. Puff shoulders and extending collars or neck pieces are not permitted by the regulations. A belt may be used at the waist, provided its design is an integral part of the garment and has no free ends after fastening.

A woman welder's garment, the regulations say, should be a flame proofed coverall of the above description, or a two piece outfit of wool trousers and shirt plus a flame proofed welder's leather set.

Shoes for the women workers should be of the safety type and of the same rugged construction as those worn by men, the regulations conclude. Steel not plastic toe caps, low heels and leather or cord type soles and heels complete the shoe specifications which meet the recently adopted American Standard Code for safety shoes.

X-10995

Women Who Work Want Shoes *for Action!*

A Study of the Shoe Industry's Greatest Opportunity for War and Postwar Times

BY

HIDE *and* LEATHER *and* SHOES

WOMEN who work aren't new on the American scene. In industry, agriculture, the professions, and business, we have had women workers in ever increasing numbers for the past century or more. The war has brought the spotlight of public attention to the working woman as never before and, as never before, women are turning out by the millions to take over jobs necessary in the war effort.

The creation of a vast new market for shoes is thus effected . . . a market which represents a war time opportunity for the shoe industry that can be just as important to worker health and efficiency as any contribution made by the food, clothing, transportation or other industries.

Nor is this opportunity restricted solely to war time possibilities. It is certain that even after all men have returned to normal employment, there will still be at least as great a market for shoes for women who work as there was in pre-war days. This represents, of course, the most conservative possibilities. The tremendously stepped up production of industry and agriculture to meet war demands is not likely to subside once the flood gates of civilian demand have again been opened; nor is it likely that women now engaged in industry, agriculture, the professions, and business will be too largely displaced by returning men.

What is the shoe industry going to do about shoes for working women? In the past very little in the way of study of requirements or merchandising has been done. Hide and Leather and Shoes has made and presents in the following pages an exhaustive study of the subject of shoes for women who work. Summed up briefly, this study shows that *women who work want shoes for action!* They want shoes that offer freedom from fatigue and protection against working hazards. They want shoes that combine good appearance with durability and they are willing to pay the price for them. They want these shoes in addition to the "style shoes" that are now regularly supplied by the industry. They want *shoes for action* . . . the following pages tell the whole story for the shoe industry.

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SEPTEMBER 4-1943

Shoes for Action a War Time Obligation

IN 1942 the shoe industry made 27,800,000 pairs of civilian work type shoes for men but it didn't make a single pair of shoes under a women's work shoe classification. In fact, there is no such classification recognized by the industry or by the Census Bureau as "women's work shoes."

In 1942, and the year before, and for many years before that millions of American women have been gainfully employed in hundreds of different jobs. When HIDE AND LEATHER AND SHOES decided to find the reason why special types of shoes were not made for women who work, it found that most manufacturers had little realization of the extent of this potential footwear market and that their designing, production and merchandising were concentrated only upon dress shoes for street, sport, or evening wear. With the exception of nurses' shoes, only a few firms produced suitable women's shoes for work wear and these were chiefly made for other purposes such as sport wear or for corrective reasons.

The War Market

—Over 14 million women were employed on Apr. 1, 1943, of which 4,250,000 were working in factories alone (representing 30 per cent of all factory workers). Nearly two million of these women were making planes and the weapons and implements of war; almost as many were making secondary war products. From Apr., 1942, to June, 1943, 83.2 per cent of all new workers were women; more must be added as the number of men in manufacturing industries continues to decline.

—Over 28½ million women were doing their own housework in 1940, constituting a vast secondary group that requires suitable work footwear for comfort and safety.

—Here is a VITAL WAR MARKET for 20 million or more pairs of women's work shoes annually.

In making its investigation of the potential market for women's work shoes, HIDE AND LEATER AND SHOES went all out in a study of female employment and shoe needs. It interviewed women's shoe manufacturers, wholesalers, retailers, and stylists; questioned women workers in many fields of employment; and discussed the subject with foot health authorities, safety directors, plant supervisors, personnel managers, etc.

This comprehensive study showed conclusively that many working women now wear footwear which is injurious to foot health, uncomfortable, and unsafe; that there is a potential market here for a whole new classification of footwear—a market that could probably consume some 20 million or more pairs of shoes annually; that work shoes for women could be easily and profitably made and readily sold; that development of this footwear would be a valuable contribution to the nation's industrial effort for victory and that this classification would constitute a great shock absorbing post-war market.

Everything that was uncovered during the investigation proved the value of the study and the urgency of the need for suitable shoes for women who work.

The Bureau of the Census reports that in 1930 there were 10,752,116 gainfully employed women in the United States. These constituted 22 per cent of the total female population over 10 years of age, and this census report reveals definitely that the market for women's work shoes is by no means a war-created market that will vanish when the war ends. It also proves definitely that this market cannot be properly served by the promotion of any shoes which have a strictly war appeal which would presumably be outmoded—by their very name if for no other reason—at the end of the war.

In 1920 there were 8,549,511 gainfully employed women, representing 21.1 per cent of the total female population over 10 years of age. Ten years earlier, in 1910, there were 8,075,772 gainfully employed women: 23.4 per cent of the total female population over 10 years of age. Even as far back as 1880, 14.7 per cent of all women in the United States over 10 years of age were working

Dressed and Shod for Action

The efficiency, health, comfort, and good looks of this charming woman war worker at the Allis-Chalmers Mfg. Co., Milwaukee, are protected by the suitable work shoes she is wearing on the job. . . .

Women's Bureau, U. S. Dept. of Labor

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in occupations for which they received salaries or wages.

This should certainly prove that a substantial percentage of women have always been gainfully employed—and the trend in this direction is steadily increasing even without the urgency of war.

There is every reason to believe that at the end of the war the number of employed women will not drop back to the point reached in 1940, though it will naturally decline from the wartime high.

The statistics reveal some interesting details of the *diversity* as well as the *extent* of female employment. The 1930 report of the Census Bureau gives the number of women working in major classifications of employment as follows:

Agriculture	909,939
Forestry and fishing	329
Extraction of minerals	759
Manufacturing mechanical industries	1,886,307
Transport and communications	281,204
Trade	962,680
Public Service	17,583
Professional Service	1,526,234
Domestic and Personal Service	3,180,251
Clerical Occupations	1,986,830

NOT Shoes for Action

The girl in the above picture is working on important supplies for the Army but she is wearing shoes that invite foot injury, lost time, and discomfort. The construction of these shoes offers no proper support for the foot during working hours; no protection from falling objects, splinters, etc. . . . H&L&S Photo

Post War Market Shown by Pre-War Figures

MORE recent statistics compiled by the Census Bureau reveal that on Apr. 1, 1940, there were 12,846,565 gainfully employed women and an additional 1,265,538 who represented themselves as "seeking work." About 90 per cent of the latter group stated they were experienced workers. This census revealed that about 25 per cent of all factory workers in the country and about 34.1 per cent of those working in retail trades are women.

From these statistics on "normal" female employment, it can readily be seen that the first test of this potential market for women's work shoes —"enough working women to form a sufficiently large market for production"—is met with positive affirmation.

Normal levels of female employment top the 10 million mark; wartime levels have soared a good 50 per cent above that mark; post-war levels will not likely decline below the prewar mark. Where can the shoe industry find a larger lucrative market for a single classification of women's shoes?

What is the aggregate buying power of this market? This is difficult to answer with specific figures, but it can be roughly estimated that the aggregate weekly income of these workers as a whole at the present time lies between 250 to 300 million dollars, with the figure steadily rising. It should be considered also that the average woman with a pay envelope is highly responsive to attractive presentations of wearing apparel—and these women are responsive to comfortable, durable, well styled, and reasonably priced shoes for their working hours.

Will women workers buy an extra pair of shoes to replace the unfit shoes they now wear at work?

An extensive survey conducted by Hide and Leather and Shoes among women workers in many representative occupations indicates that they will. This is especially true of factory and agricultural workers and others engaged in like employment. It is also true of clerks and those whose working hours are spent on their feet. It is less true of office workers who seem generally satisfied with the shoes they are now wearing and who find little need to draw a line between their street shoes and their work shoes—a circumstance which will respond to the right merchandising and educational persuasion.

How much will women workers pay for such shoes? This survey reveals that most employed women are willing to pay about the same for their work shoes as they now pay for dress type shoes and many of them said they will pay more. Some of them are accustomed to paying well above five dollars a pair for their shoes, and this seems to them a proper price for work shoes. Others see no reason why they should pay more than $3.00 to $5.00 a pair for the same grade they are now obtaining at these levels in dress and novelty footwear. This indicates that the work shoe market is wide open for manufacturers of all common grades of women's shoes.

The Post War Market

—Approximately 10 million women were employed in pre-war peacetime occupations. They were, while on the job, the most improperly shod group in the country—there were no work shoes for women, except nurses.

—Millions of housewives performed their tasks in footwear that was so unsuitable that it partly accounted for the high rate of home accidents and many foot and body ills.

—Post-war employment of women will not decline to pre-war levels because women workers will be needed for production in new fields and replacement of products not being manufactured during the war; also because the size of the armed forces will probably remain well above pre-war levels for a long period.

—Employed women and housewives represent an unrestricted potentially PROFITABLE PEACE MARKET for 40 million or more pairs of proper work shoes annually—the receptive bread-and-butter market the industry needs for post-war profits.

Here Are the Figures on Female Employment

This worker's feet are protected by good work shoes, her body by an all leather welders' suit, her hands by gauntlets, her eyes by goggles, and her head by a shield.

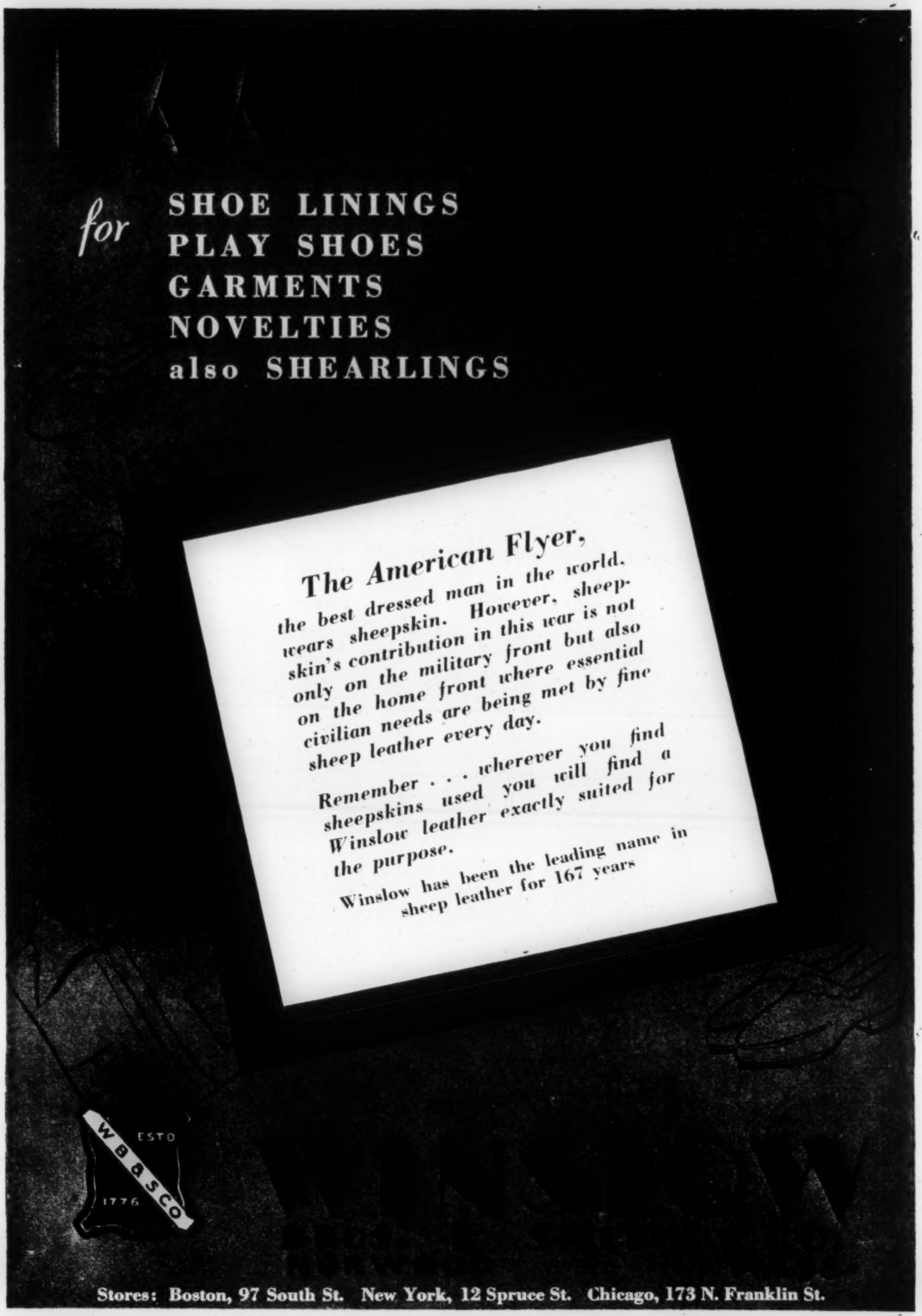
Women's Bureau, U.S. Department of Labor.

PERSONS GAINFULLY OCCUPIED, BY SEX, 1880-1930

Sex and Census Year	Total Population	Population 10 Years of Age and Over	Persons 10 Years and Over in Gainful Occupations		
			Number	Pct. of Total Population	Pct. of Population 10 Years and Over
Male					
1930	62,137,080	49,949,798	38,077,804	61.3	76.2
1920	53,900,431	42,289,969	33,064,737	61.3	78.2
1910	47,332,277	37,027,558	30,091,564	63.6	81.3
1900	38,816,448	29,703,440	23,753,836	61.2	80.0
1890	32,067,880	24,352,659	19,312,651	60.2	79.3
1880	25,518,820	18,735,980	14,744,942	57.8	78.7
Female					
1930	60,637,966	48,773,249	10,752,116	17.7	22.0
1920	51,810,189	40,449,346	8,549,511	16.5	21.1
1910	44,639,989	34,552,712	8,075,772	18.1	23.4
1900	37,178,127	28,246,384	5,319,397	14.3	18.8
1890	30,554,370	23,060,900	4,005,532	13.1	17.4
1880	24,636,963	18,025,627	2,647,157	10.7	14.7
Both					
1930	122,775,046	98,723,047	48,829,920	39.8	49.5
1920	105,710,620	82,739,315	41,614,248	39.4	50.3
1910	91,972,266	71,580,270	38,167,336	41.5	53.3
1900	75,994,575	57,949,824	29,073,233	38.3	50.2
1890	62,622,250	47,413,559	23,318,183	37.2	49.2
1880	50,155,783	36,761,607	17,392,099	34.7	47.3

GAINFUL WORKERS 10 YEARS OLD AND OVER, BY OCCUPATIONS, AND SEX

Census Year and General Division of Occupations	Number			Per Cent Distribution			Per Cent of Total	
	Total	Male	Female	Total	Male	Female	Male	Female
Agriculture	10,471,998	9,562,059	909,939	21.4	25.1	8.5	91.3	8.7
Forestry and fishing	250,469	250,140	329	0.5	0.7	....	99.9	0.1
Extraction of minerals	984,323	893,564	759	2.0	2.6	....	99.9	0.1
Manufacturing and mechanical industries	14,110,652	12,224,345	1,886,307	28.9	32.1	17.5	86.6	13.4
Transportation and communication	3,843,147	3,561,943	281,204	7.9	9.4	2.6	92.7	7.3
Trade	6,081,467	5,118,787	962,680	12.5	13.4	9.0	84.2	15.8
Public service (not elsewhere classified)	856,205	838,622	17,583	1.8	2.2	0.2	97.9	2.1
Professional service	3,253,884	1,727,650	1,526,234	6.7	4.5	14.2	53.1	46.9
Domestic and personal service	4,952,451	1,772,200	3,180,251	10.1	4.7	29.6	35.8	64.2
Clerical occupations	4,025,324	2,038,494	1,986,830	8.2	5.4	18.5	50.6	49.4
1930, All occupations	48,829,920	38,077,804	10,752,116	100.0	100.0	100.0	78.0	22.0
Agriculture	10,665,812	9,582,666	1,083,146	25.6	29.0	12.7	89.8	10.2
Forestry and fishing	270,214	269,541	673	0.6	0.8	....	99.8	0.2
Extraction of minerals	1,090,223	1,087,359	2,864	2.6	3.3	....	99.7	0.3
Manufacturing and mechanical industries	12,831,879	10,901,527	1,930,352	30.8	33.0	22.6	85.0	15.0
Transportation and communication	3,096,829	2,872,559	224,270	7.4	8.7	2.6	92.8	7.2
Trade	4,257,684	3,585,701	671,983	10.2	10.8	7.9	84.2	15.8
Public service (not elsewhere classified)	738,525	727,939	10,586	1.8	2.2	0.1	98.6	1.4
Professional service	2,171,251	1,154,221	1,017,030	5.2	3.5	11.9	53.2	46.8
Domestic and personal service	3,379,995	1,193,313	2,186,682	8.1	3.6	25.6	35.3	64.7
Clerical occupations	3,111,836	1,689,911	1,421,925	7.5	5.1	16.6	54.3	45.7
1920, All occupations	41,614,248	33,064,737	8,549,511	100.0	100.0	100.0	79.5	20.5
Agriculture	12,388,309	10,581,685	1,806,624	32.5	35.2	22.4	85.4	14.6
Forestry and fishing	241,806	241,249	557	0.6	0.8	....	99.8	0.2
Extraction of minerals	965,169	964,075	1,094	2.5	3.2	....	99.9	0.1
Manufacturing and mechanical industries	10,656,545	8,835,698	1,820,847	27.9	29.4	22.5	82.9	17.1
Transportation and communication	2,665,269	2,549,922	115,347	7.0	8.5	1.4	95.7	4.3
Trade	3,633,265	3,160,562	472,703	9.5	10.5	5.9	87.0	13.0
Public service (not elsewhere classified)	431,442	426,606	4,836	1.1	1.4	0.1	98.9	1.1
Professional service	1,711,275	976,523	734,752	4.5	3.2	9.1	57.1	42.9
Domestic and personal service	3,755,798	1,225,395	2,530,403	9.8	4.1	31.3	32.6	67.4
Clerical occupations	1,718,458	1,129,849	588,609	4.5	3.8	7.3	65.7	34.3
1910, All occupations	38,167,336	30,091,564	8,075,772	100.0	100.0	100.0	78.8	21.2



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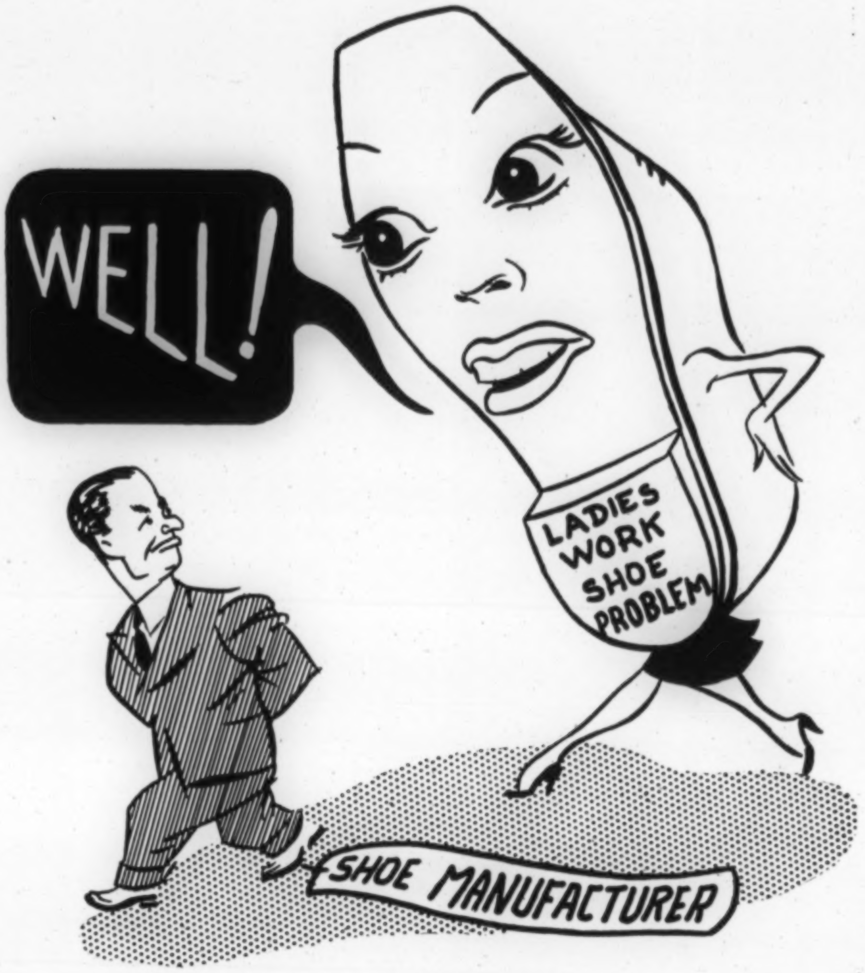


It's Your Problem . . . Women Want Your Solution

IN 1942 about 500 shoe manufacturers produced the staggering total of nearly 182 million pairs of women's shoes. This does not include footwear classified as misses' shoes nor any in the athletic, part leather and part fabric, all fabric, slipper, or beach sandal classifications. The production of footwear in the "women's shoes" classification alone represented about four pairs for every woman in the country.

In this single classification there were shoes designed for practically every occasion and purpose of feminine wear with one notable exception—there were no shoes specifically designated for work wear. Therefore, it is indicated that the industry neglected to recognize the vitally important footwear needs of over 13 million women who spent a large part of their time working in factories, stores, offices, and on farms.

Women who work—millions of them—have been left to choose between two general types of footwear for their working hours. Dress shoes which had generally become too worn or shabby for the purpose for which they were purchased; or the so-called "sensible" and "comfort" type of shoes. The single exception to this was in the nursing field. Many manufacturers produce "nurses' shoes" in a wide range of prices. This field is profitable. Most of the footwear so classified is well suited to the needs of women in the nursing profession. Most of these shoes are not suitable for general work wear, in the opinion of foot health authorities and of employed women who were questioned during the course of this study.

It requires no argument to prove that the wearing of battered dress shoes as working footwear is highly unsatisfactory and dangerous. Such footwear, with high heels and light construction, or poorly made, is not designed for work wear.

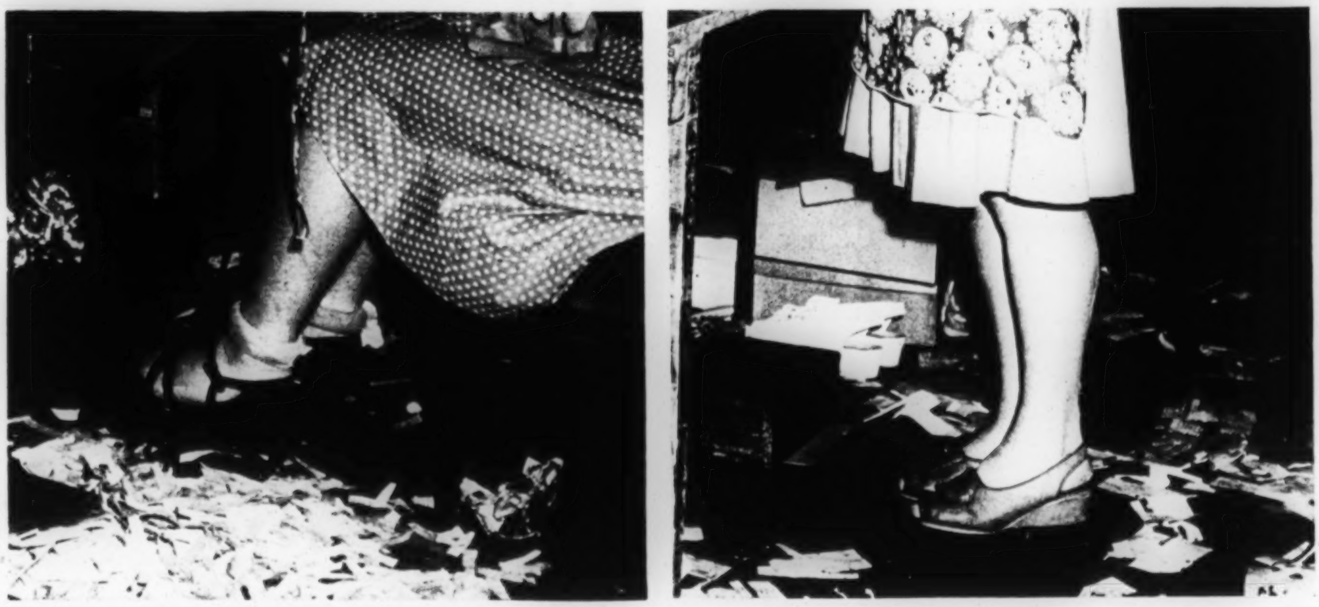
Many of the so-called sensible, comfort, and walking shoes would be satisfactory for work wear but there are not enough of these to provide footwear for the work field in addition to the field for which these shoes are primarily designed. Furthermore, some of these shoes are clumsy and many are available only at retail prices which are generally higher than the prices paid by the average working woman for her dress shoes.

The correspondents of Hide and Leather and Shoes interviewed hundreds of makers of women's footwear asking them pertinent questions and obtaining frank opinions in reply. Briefly it may be said that some women's shoe manufacturers feel that their customers would not be attracted by the prosaic title "work shoe"; that most agree there is a need for more suitable footwear for women who work and that such shoes could be designed attractively and made profitably.

Many manufacturers and distributors held no strong prejudices against women's work shoes; in fact they thought there might be some advantage to be gained if such a classification was commercially established and accepted. But almost without exception they wanted someone else to take the first step. The commonest expression heard in the trade by Hide and Leather and Shoes' correspondents who interviewed manufacturers and distributors throughout the women's field was: "We'll make work shoes for women, if it is shown that there is a need and a demand for them." However, some showed an eagerness to cooperate in establishing a women's work shoe classification.

The views of the shoe trade were reported in detail on July 4 and August 1, 1942 in Hide and Leather and Shoes.

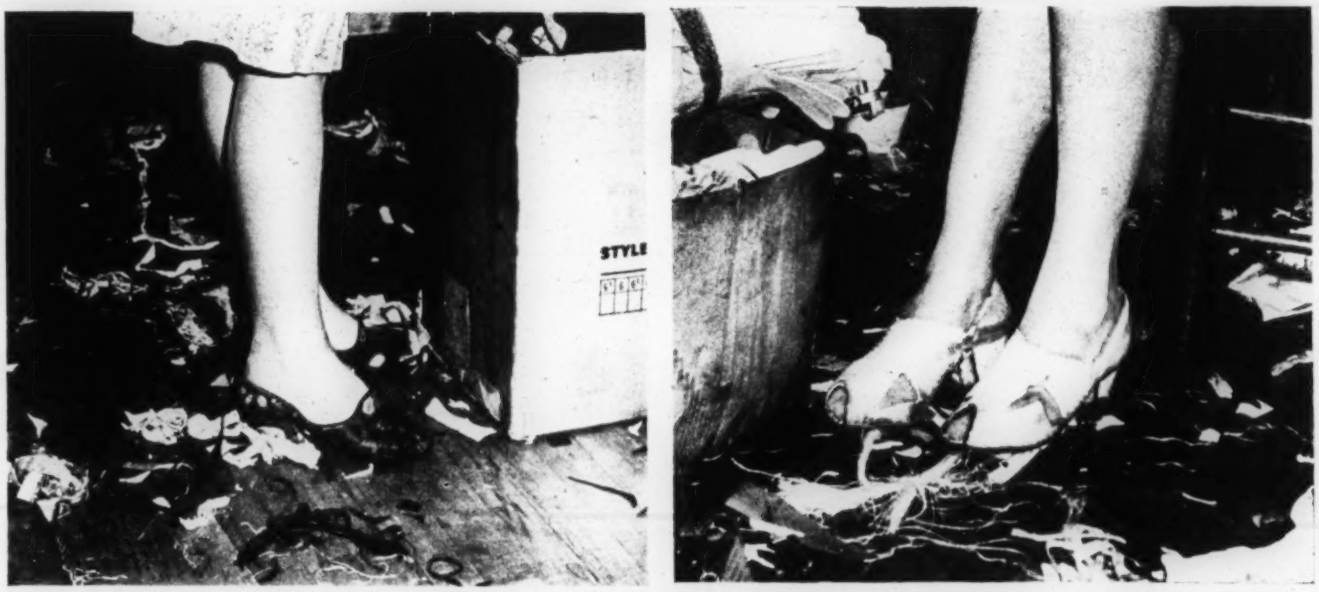
The need for women's work shoes has been proved; a large potential market for them has been analyzed; the willingness of shoemen to undertake the job of developing and promoting women's work shoes has been shown.



Shoes like those shown at the right are comfortable for standing, but open toes and heels invite trouble from the many hazards that are present in every industrial plant. Shoes like those worn by the girl at the left give no support to the feet and offer absolutely no protection from falling objects, protruding nails and splinters in benches, floors, etc. H & L & S Photos

CAMERA

Photos show some of the weaknesses of shoes women use for work.



NO SUPPORT FOR THESE FEET

The girl at the left stands on her feet all day, working in house slippers which provide no support for her ankles and arches, while the girl at the right wears a pair of outworn open-toe dress shoes which she has cut away in places for greater comfort. Such shoes are familiar sights in hundreds of factories . . . H & L & S Photos

What Do Women Workers Have to Say?

UNLESS it is evident that consumers will accept suitable footwear that has been classified as work shoes, there is no object in proceeding further. Do women want work shoes? Will they buy them? What will they pay for them? What kind of shoes do they want in this classification? How much interest is there among feminine consumer organizations in such shoes? What do industrial health authorities say about work shoes?

These are among the questions to which HIDE AND LEATHER AND SHOES has sought the answers. It found that Government agencies concerned with consumer interests are anxious to cooperate in every way. It found prominent national women's organizations interested and eager to obtain more information. It found prominent employers willing to cooperate in any way that they could to interest their female workers in the subject of better footwear. It interviewed women in diversified occupations and found them receptive; further, they had very clear ideas generally as to just what they wanted most in work shoes. The response proved definitely that the theory that women won't accept "work shoes" and that they are only interested in glamour and fashion whether on the job or not is nothing but a myth.

Space will not permit reporting in detail the interest that has been shown in this study by Government agencies, employers, and women's organizations, but it is important to shoemen who are interested in developing this classification of footwear to know that this study has created a definite and enthusiastic interest among influential organizations directly concerned with the consumer aspects of women's work shoes.

But what do the workers think? They will pass final judgment on women's work shoes. They will pay the bill for these shoes. What sort of shoes do they want for work wear, and how much will they pay for them?

To get this information at first hand, HIDE AND LEATHER AND SHOES interviewed thousands of women workers. In this consumer survey, care was taken to obtain sample opinions from workers in a wide field and a representative diversity of occupations.

It is obvious that the footwear needs of women on one type of job will not be the same as those of women on an entirely different type of job. It is possible, however, to study the occupational conditions affecting employed women as a whole and to adopt footwear to meet those occupational needs by segregating female employment into a relatively limited number of classifications. For this reason, it is far more important in planning a line of women's work shoes to study the market's needs on a basis of *types of occupations* rather than on an industry basis, because occupational requirements vary within industries and at the same time overlap from industry to industry.

This basis of occupational study was used by HIDE AND LEATHER AND SHOES in making this survey, and the replies were secured from workers engaged in occupations representative of those in which women are engaged in substantial numbers, with a few important exceptions.

Women who are working in unusual fields where their footwear needs are well defined but not typical of the group as a whole were not interviewed. No study was made of consumer opinion in the nursing profession, because this is the one field of employment that has already been provided with specially designed occupational footwear. Nor was any study made among domestic workers, as it is believed that the footwear needs of domestic workers and housewives will be suitably met by creating an appropriate line of work shoes for women employed in industrial and commercial occupations.

It has already been pointed out that working women are not wearing suitable footwear on the job, despite the attention that has been given in recent years to suitable clothing for working women. The women workers questioned in this survey corroborated this point:

Regular dress shoes which have become too shabby or outworn for street wear are worn at work by 46.23 per cent of all the workers questioned. This simply means that nearly half of these women are wearing shoes on the job that were not originally designed for work wear, that were unsafe, unhealthy, and uncomfortable for such wear even when they were new, and which are still less satisfactory when finally worn at work.

The other half (53.77 per cent to be exact) of these women represent a direct contradiction to the theory that women will not buy work shoes.

They are *already* buying an extra pair of shoes for work wear, and many are still selecting these as best they can from footwear originally designed for other purposes and usually identified by such terms as playshoes, casuals, sport shoes, etc. These terms cover a wide field and women who are now buying these types for work wear say the terms are confusing when they shop for work shoes—shoes to be worn during their working hours and not for play or sport or casual street wear.

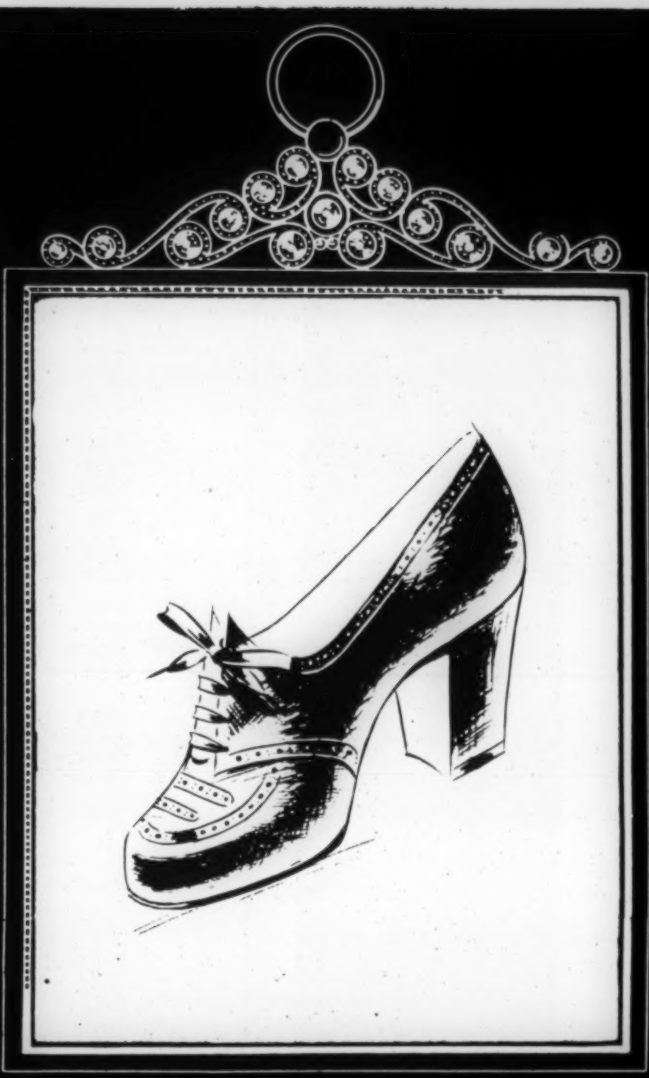
What price would these working women be willing and able to pay for shoes that were designed and made especially for comfort, safety, and durability as properly identified work footwear?

Up to $2.50 said 2.8 per cent; 23.2 per cent would pay between $2.51 and $3.50; 32.6 per cent would pay $3.51 to $4.50; 34.3 per cent would pay $4.51 to $6.00; and 7.1 per cent would pay over $6.01; 1.8 per cent did not answer this question.

An analysis of these answers proves that women will generally pay *more* for proper work shoes than they are now paying for dress shoes. Based on a survey of over 40,000 women, adjusted to conform to prevailing retail price levels in the women's shoe field in 1942, it is estimated that retail sales of all women's footwear fall into the following price ranges: Up to $2.50, 20.85 per cent; $2.51 to $3.50, 29.14 per cent; $3.51 to $4.50, 21.25 per cent; $4.51 to $6.00, 9.66 per cent; over $6.00, 19.10 per cent.

The types of shoes now worn by these women are shown by the following percentages: Oxfords, 74.5 per cent; pumps, 10.7 per cent; boots, .01 per cent; orthopedic, 2.7 per cent; nurses', 4.6 per cent; safety, 1.6 per cent; "just any kind available," 9.7 per cent.

Oxfords are predominantly in the lead among the types of footwear commonly worn by women workers, the survey shows. Only one per cent of the women interviewed failed to



Maracain shoe, MALVERN
by Newton Elkin Shoe Co.

NEW CASTLE KID

JUDGE IT BY
Quality
ITS USERS

Like all the
KIDSKIN finishes
That bear the
New Castle trademark,
MARACAIN is a
Dependable, long-wearing
KIDSKIN,
Developed for
Utility as well
As beauty and
Surface interest.

New Castle Division *Allied Kid Company*
100 Gold Street, New York City

Service Leathers . . .

BY THE MAKERS OF

ORIGINAL
GENUINE
Kleenette
REG. U. S. PAT. OFF. NO. 383734
WASHABLE
LEATHER

Kleenette has gone to war and the materials used in making this popular white washable elk leather are now going into war materials that will speed the day when you can again secure the glistening, sales-boosting king of white shoe leathers.

Now the maker of Kleenette is producing high grade leathers for Army nurses' shoes —Tank helmets—Cap visors—Aviators' flying jackets—Aviators' helmets—Ski troop mittens—Gloves and a variety of the Specialty leathers for the armed forces. We're proud of these leathers and proud of the job they're doing.

And we're proud of the leathers we're making for men and women who are fighting on the front behind the front, on the great production line of American industry and who are maintaining essential civilian services.

An ideal shoe for the working woman

Made of

Ross-ette

Put Womanpower to Work

Ten million men are missing from their former jobs in plants and essential civilian services . . . because their job *now* is in our armed forces.

American women must take the place of these missing men, must do nearly everything they used to do.

Put *womanpower* to work in your plant. Cooperate with others to help women do a man's sized job.

A. H. Ross and Sons Co.

Tanners Since 1888 ***1229-37 N. Branch St., Chicago, Illinois***

AGENCIES

Bankart and Samuelson, New York
Merchant Loveys Lea. Co., Boston
Al. W. Meier Co., St. Louis.
A. W. Patton Co., Milwaukee
Schoenberg Lea. Co., Philadelphia
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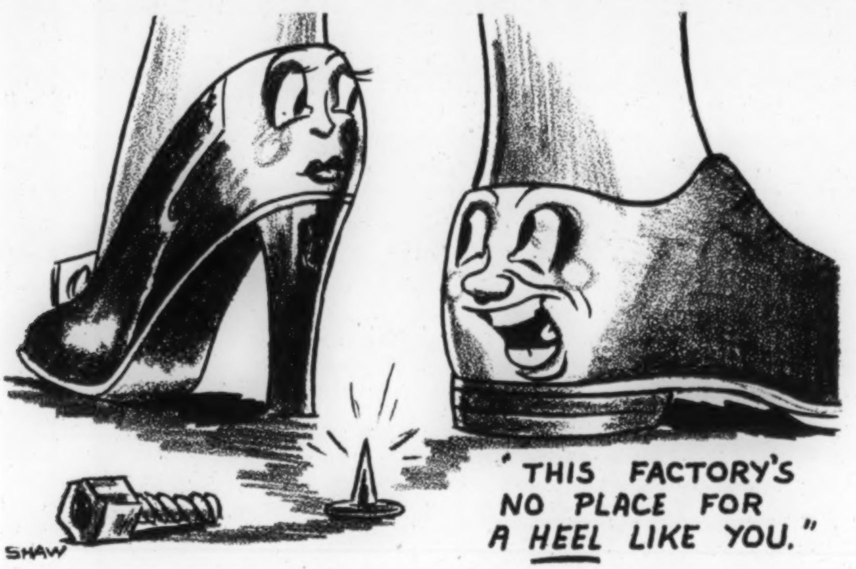
Glamour Takes Second Place


"THIS FACTORY'S NO PLACE FOR A HEEL LIKE YOU."
SHAW

indicate the type of shoe now being worn. Of those who did answer, 4.8 per cent indicated more than one type.

Low heels are now the most popular, followed closely by medium heels. Only .3 per cent of the workers did not answer this question, while 8.1 per cent said they are wearing more than one heel height. The replies were as follows: Low heels, 59.0 per cent; medium heels, 42.2 per cent; high heels, 6.6 per cent.

Asked about the points which they felt would be most desirable in a specially designed work shoe, 68.8 per cent of the replies mentioned low heels; medium heels were named in 56.1 per cent; and high heels in 2.3 per cent; 30.3 per cent specified more than one height; and 3.1 per cent did not answer. In this connection, it is interesting that a number of women said they could not wear too low heels, because they were not satisfactory on machine operations requiring the use of a foot treadle, and a number of workers stipulated that they wanted rubber heels, although this question was not directly asked.

Light weight uppers for work shoes are wanted by 26.9 per cent of the workers; medium weight by 37 per cent; and heavy weight by 0.5 per cent; while 35.6 per cent did not express a preference.

Leather soles were far in the lead as preferred by women for work wear: 69.8 per cent specified leather soles; 21.1 per cent want rubber soles; and 0.5 per cent want wood soles. 8.6 per cent did not answer this question.

In direct contradiction to the trade theory that working women place style above all other desirable qualities, even in work shoes, style came out badly in this survey, while comfort led the list of desirable qualities.

Comfort was specified in 86.1 per cent of the replies; safety in 54.3 per cent; durability in 66.6 per cent; and style in only 38.9 per cent.

The individual comments of the women workers were even more revealing than the statistical compilation of their replies. They ranged all the way from that of the worker who said: "Any shoe is all right for me; I'm not fussy," to comments that included carefully detailed specifications of the worker's footwear dream. Space will not permit quoting all of these comments here, as hundreds had specific suggestions to offer, but the following have been selected for their interest and their pertinence to the study.

Difficulty of securing suitable shoes for work wear in good size ranges was mentioned frequently. One worker said: "It depends largely on the width of the foot whether you can buy medium priced shoes. I wear a triple A and it is very hard for me to find work oxfords as narrow as this in a low priced shoe." This worker reported she is now paying $3.50 for her shoes and would pay $3.50 to $4.00 for more suitable work footwear.

Another worker, who is willing to pay $6.50 for her work shoes, asked: "Do they make a work shoe with style and comfort for a size 8½ AAA or AAAA width and narrow heel?"

The relation of size and fit to comfort was emphasized repeatedly in the workers' comments.

One said: "I wear a 5 A shoe and I am not able at the present to get them unless I order them special and pay $3.00 more than the regular price." (She is now paying $8.95 and thinks $6.50 would be a more reasonable price for what she wants.)

Another worker, who is willing to pay $4.00 for work shoes, said: "My main trouble is the counter is never narrow enough in cheaper shoes; also counter is usually stiff and too high."

Another commented: "I want light weight and cool shoes of soft leather or its equivalent. I'm not hard on shoes but have an exceptionally hard time getting a good fit. I would suggest that more size 6 AA shoes be made in each style."

Two other workers have found it difficult to obtain the sizes they wanted. One said: "A 6AAA is very hard to get in a low heel shoe, so I wish they would make more of them." The second asked: "Please forward me a 9B—any shoe. I find it difficult to secure this size in a shoe."

"Correct size is difficult to purchase," another worker finds, adding that "the price is too high when shoes are made to order." This worker is now paying $6.00 and $7.00 for shoes and wants to find a suitable work shoe in her size at $6.00.

Another worker wants "a perfect fit and choice of two or three different sizes (at $8.00) as I have great difficulty in obtaining a shoe in my size." Still another reported: "I wear a very narrow width and I find that they are not available in low priced shoes." This worker is willing and able to pay $4.00 to $5.00 for her work shoes.

A plea for comfort dominated the response of the working women. "Just comfort" begged one, and another asked: "Please make a shoe that does not hurt my corns, and have it perforated." A third said she would pay about $5.00 for "a shoe that will give me good support and long wear, take off my legs the strain from long hours of continual standing." Still another is looking for "a shoe with a heavy sole so that when I sew all day the balls of my feet will not burn."

Another seeker after comfort (at $4.00) asks for "soles that are not stiff as they make feet sore, and with plain toe and long vamp. Being this way, they do not bother feet that are tender. Soles should not be too thin for anyone required to be on their feet eight hours."

"A shoe with a moccasin toe seems most comfortable," one worker said, but others disagreed and several urged that work shoes be made with as few seams as possible so that there would be no ridges to chafe their feet after long hours of wear under working conditions.

The need for good arch supports was emphasized by many of the workers, while others stressed a desire for "shoes that would be cool on your foot."

"Cooler shoes" for work wear were stressed by a number of the workers, who suggested perforated summer shoes repeatedly. Open toed shoes, however, were definitely in disfavor. "No toeless or heelless shoes—they are too hard on the feet. I won't even buy them for dress," commented one worker, summarizing the viewpoint of many others who expressed their opinions in this survey.

Although the workers plainly indicated that style was a far less desirable attribute for women's work shoes than others, they were not unmindful of the values of good appearance in their work shoes. One girl succinctly expressed her vote for a "sporty model" at $4.00. Another, who is now paying $5.00 to $7.00 for her shoes said: "I like a shoe which is comfortable but also good looking, one which has a good arch support and heels of medium height. Do not like the appearance of some health model shoes where style is entirely sacrificed to comfort."

Appreciation of footwear quality and comfort was expressed by the worker who said: "When one is doing work that requires being on one's feet all day a good, sensible shoe should be chosen. Then the price you pay is not too much if you are comfortable, and the shoes give you good wear. Everyone who pays a high price for shoes looks forward to getting their money's worth as well as taking care of their feet."

A busy secretary said: "For work in an office I should like a shoe with a medium heel, preferably a tie or strap for good support and comfort, plus style. Why is it that a shoe with a low or medium heel, which is the most comfortable, should be so lacking in style? . . . And why cannot it be made as pretty, stylish, and flattering to the legs and feet as a high heel?"

An interesting comment was made in widely separated plants concerning shoe laces. Several workers stipulated "good shoe strings" and "strings that stay tied" as requisites of good work shoes.

A keen observation was made by one worker who said that "usually the most comfortable shoe is not the safest for the feet. More safe shoes should be made for people who stand at their work all day."

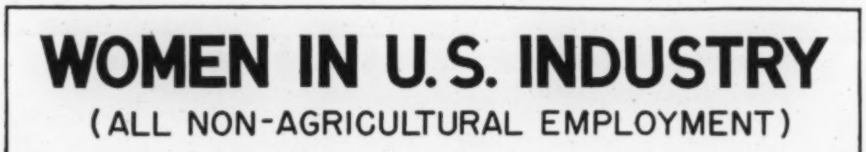
A brief summary of other comments made by the women workers who cooperated in this study reveals a diversity of desires, most of which, however, could be satisfied by coordinating the various details into a relatively small number of basic designs.

The problem of finding shoes suitable for work wear on oily floors troubles workers who are confronted with this occupational condition. A number of workers are seeking "a shoe more durable for use on oily floors" and one observed that she wanted wood or leather soles "because rubber soles curl up after wearing them on an oily floor." Another, however, asserted: "I like rubber soles because they don't slip on oily floors and they wear longer."

"Shoes that hold their shape and that permit the foot to perspire freely" are sought at about $4.00 by one worker. Another wants "a shoe that's light enough so it won't wear out the feet of our stockings." A third says: "Oxfords bother my feet, and I need a high or medium heel to run my machine."

The economic factor was brought out by one worker who said: "The price I pay for my shoes depends on how much I make a week." This worker, like many others, reported that her average wages are at a high level and said that she would like to buy better work shoes than she had been wearing in the past. Another worker would pay $4.00 to $6.50 for good work shoes and wants "shoes with straps, rather than pumps or oxfords." A worker who is willing to pay $6.50 for her work shoes is looking for "shoes that stand wet weather as well as dry weather, with good strong arches." She complains that "most shoes are too weak in the arches for general wear, especially in a low priced shoe."

A conservation note was evident in one comment. "As a matter of economy I suggest leaving out the tongue in oxford ties. This will save leather, and without the tongue the shoe is much more comfortable." Another worker offers, as a comfort suggestion: "Elastic should be put around the upper part of the work shoes, just as it is used in dress pumps, thus getting a snug, comfortable fit."



Production, like morale, is a lot of little things . . . .

and one of them may be a Boston Machine Works Company appliance.

WWW
★ WOMEN WAR WORKERS ★

Shoe manufacturers have a hard enough time getting materials and labor into the plant without having to worry about new constructions and techniques.

For the constant flow of changes which the shoe factory foreman and machinist must meet and contend with, the Boston Machine Works Co., has developed a wide variety of machines, and hundreds of ingeniously constructed parts and appliances for those machines, that help keep production problems solved.

Get into the habit of calling in a Boston Machine Works Company representative whenever you have a production problem.

BOSTON MACHINE WORKS CO.

LYNN **MASS.**

Whitman, Mass. Johnson City, N. Y. Columbus, Ohio Cincinnati, Ohio Chicago, Ill. Milwaukee, Wis. Kitchener, Ont. St. Louis, Mo. Westfield, N. J. Los Angeles, Cal.

Womanpower and manpower work together in the building of giant planes for Victory. Suitable shoes are important to both, but until recently the men were the only ones who could secure satisfactory and clearly identified work shoes. Much has been accomplished in improving the women's work shoe situation. Much remains to be done.

Official OWI Photo by Hollem

Four Billion Dollars For Accidents in 1941

Accidents in 1941 cost the nation four billion dollars—enough to build a fleet of battleships or a huge invasion force of deadly Flying Fortresses.

On-the-job accidents killed 18,000 workers, injured 1,600,000, cost $850,000,000 and resulted in the loss of 466 million man-days of work. The lost time alone was the equivalent of work that could have been done by 150,000 new workers.

Warning that mechanical processes are probably new to many women workers, the U. S. Department of Labor notes that "many plants have found that women, given the right job training, maintain a better safety record than men."

"Women, like men, need proper work clothing," the Labor Department warns. "Be sure that women wear low heeled, sturdy shoes, keep their hair covered, and do not wear jewelry."

Women Want Safety in Their Shoes for Action

THE safety factor is not disregarded by women employed in the more common occupations nor by their employers. A number of employers are stressing in their safety programs the need for suitable footwear, kept in good repair, as an aid to safety.

Many of the women who took part in the survey of worker's opinions emphasized their desire for safe footwear—54.3 per cent of those questioned mentioning this as an essential requirement.

The Women's Bureau of the U. S. Department of Labor, in its booklet on "Safety Clothing for Women in Industry" has this to say about shoes:

"Much fatigue and nervousness can be laid to badly fitting shoes. If you suffer from chronic fatigue or pain in your feet or in the muscles of your legs, ask the plant physician or nurse to advise you about the right kind of shoes to wear.

"The correct shoe is long enough to place the ball of the foot in the tread of the shoe. The shoe allows for the natural spread of the toes, and fits snugly around the heel and instep. The heel is medium or low. The foot should always be measured with the standing weight placed on the measuring rule. The width should be fitted as carefully as the length. If deformities exist, exercise and mechanical devices will help.

"High or run down heels and thin or worn soles can be the direct cause of a fall. Well fitting shoes with low heels and good soles can help to maintain footing on wet or slippery floors.

"Falls are a major cause of women's injuries in industry; and they are especially serious, and result in much loss of time, among older women. Important causes of falls are wet, slippery floors and other evidences of poor factory housekeeping.

"Some occupations require the wearing of safety shoes. Usually this is necessary if there is any danger of dropping heavy material. They can be as comfortable to wear and as attractive in appearance as an ordinary shoe. Such shoes with reinforced vamps have saved the loss of many toes. Several nationally known firms make them in all sizes for both men and women.

"A specially designed foot protector for girls working in an optical glass department is a piece of aluminum curved to fit the top of the foot. This is protection to the instep and top of the foot against falling glass or other falling objects. Where workers handle acids, or where conditions of great heat or moisture exist, wooden soled shoes have been designed.

"Women who work where explosives are manufactured or handled must wear shoes with sewed or wooden pegged soles and heels with copper nails."

The bulletin lists footwear equipment necessary when the following occupational hazards are present:

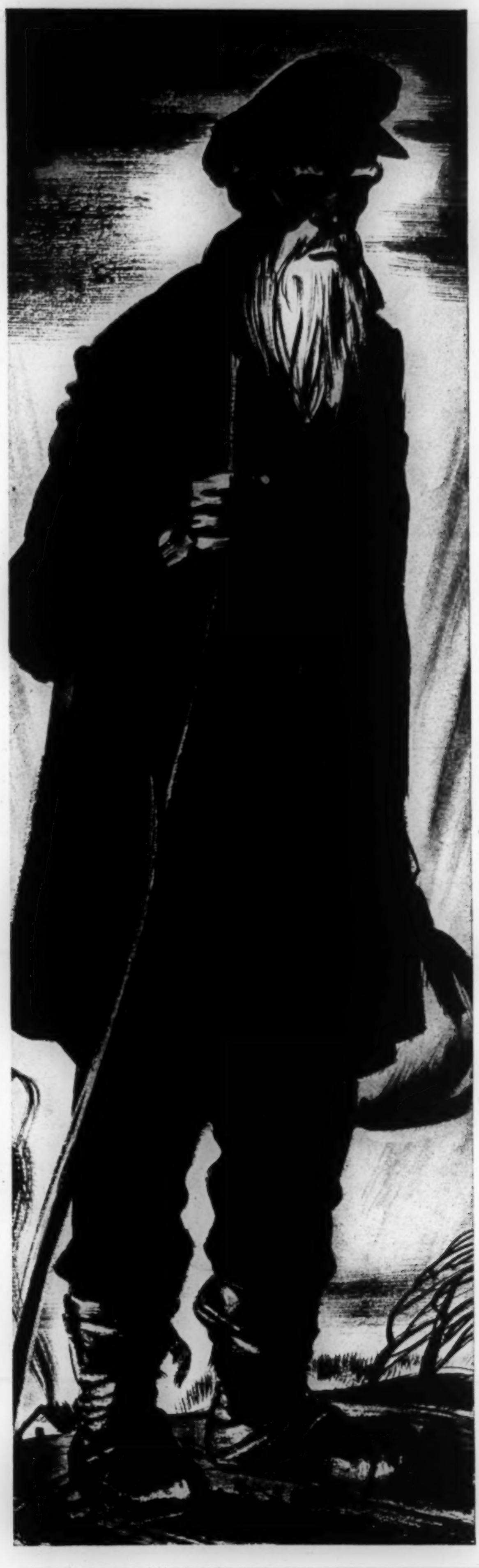
Corrosive substances, alkalies, or acids: Rubber or chrome leather shoes with wooden soles and, in case of corrosives, with sewed sole.

Cuts: Chrome leather is advised for coat, apron, shoes, leg and arm protectors, and gloves.

Dermatitis: Clothing of rubber, possibly including rubber shoes.

Falling objects: Shoes with reinforced toes.

(*Continued on page* 38)



Through the inventive skill of war-wise American shoemakers, tanners, and supply houses in developing less critical materials or processes, the production of well-made civilian shoes has continued apart from the conservation of all basic supplies for military needs. Though the furbelows of high-styling have gone, Americans of all ages are toddling — striding — marching toward Victory in *leather* shoes still structurally built with sound thread and nails, good counters and box toes — shoes that are emblems of our unconquered freedom and our resourceful economy.

SYMBOL

Feet bandaged in rags — eternal symbol of a conquered people. Even the garment of Hunger gauntly worn in the stare of sunken eyes, in pallid flesh, and wasted body is prouder dress than unshod feet . . . cold . . . aching . . . raw.

BECKWITH

DOVER - NEW HAMPSHIRE

Serving — with twenty-six production materials out of a peacetime thirty — the box toe requirements of a great American essential industry. Serving also — in all laboratories — experimental projects for military and civilian defense materials and through *Victory Plastics Company, important ordnance needs of the war effort.

*

"In that line of march is the fellow who watched over me on the range while I grew up, the fellow who helped tan my hide and the fellow who helped make me into shoes and other things . . . and I'm all over the picture, marching along with them. They have given up their regular jobs to do a job for all of us, let's back them up."

THE UNITED STATES LEATHER COMPANY

Falls or slips: Shoes with non-skid soles.

Hot liquids: Shoes opening at the side and made of chrome leather.

Hot materials: Wooden soled, chrome leather shoes without front lacing.

Moisture: Chrome leather or rubber shoes.

Punctures and blows; rough, sharp objects: Chrome leather shoes with reinforced toes.

Spark explosion: Shoes with sewed or wood pegged soles, copper nailed heels.

Work Shoes Fill Health and Safety Needs

(Reprinted from *Labor Information Bulletin*, U. S. Department of Labor, July, 1943)

In industry the millions of women producing war material include many thousands who have been housewives and are not used to the speed, noise, constant standing, and accident hazards presented in the factory. Attention to proper footwear for these women is most important.

No item of clothing has more to do with the safety, comfort, efficiency, productivity, and general health of workers than the shoes they wear. It is a matter of common knowledge that women suffer from many foot ailments. Among 1,000 cases seen in a foot clinic there were 15 times as many females as males. Abnormalities of the forefoot were most common. Flat feet, severe corns, ingrowing nails, arthritis were among the disabling conditions found.

It has long been noted that working women constitute the most improperly shod group in America when they are on the job, and women's work shoes have been, until very recently, the most neglected type of footwear in the country. The needs of wartime industry have focused more attention on work shoes than before. The American Standards Assn. has prepared standards of construction and specifications for a number of types of protective footwear for women as well as for men. The shoe and leather weekly, HIDE AND LEATHER AND SHOES, conducted a study over a long period covering many phases of the situation affecting women's work shoes. The report included consumer attitudes and needs as well as the shoe industry problems; it found that women need work shoes to be effective producers of food on the farm, of war material in factories, of ships in the nation's shipyards.

Open toes and backs, high heels, flimsy materials, shoddy construction all endanger the foot and bodily safety of the wearer. Injured feet can almost always be prevented by the wearing of proper, safe shoes. Bodily injury can often be prevented by the same precaution. Foot and body fatigue is in many cases traceable to the wearing of improper work shoes, and any woman's shoe that does not provide safety is not a suitable shoe for work wear. Exploitation of such shoes for wear at work in war industries where foot hazards are greater than normal is nothing short of criminal.

The specifications of a safe work shoe for women cannot be summed up in a single code. The shoe that is entirely safe and satisfactory for one occupational condition may be dangerous for another. Occupational conditions must be studied carefully when recommending any work shoe for women.

In one out of 10 occupations a safety toe shoe (usually fibre or plastic box toe) is essential; in the other nine, shoes with other types of foot protection or safety details are desirable. For many jobs the best shoe is a well fitted oxford with low, broad heel.

Special features that may be needed in shoes for specific women's occupations include these:

Types of platforms and wedge heels devised to give adequate support without the use of steel shanks and to provide cushioned comfort on cement floors and wood floors. Platforms of felt, cork, compositin, or new cork compound, covered with leather, to insulate against heat and cold.

Full chrome tan leathers treated for resistance to oil and dampness, with oils as used by the Army; all selected for firm yet flexible texture, and finished with coating film of lacquer to prevent penetration by slivers of metal.

Wood soles for work exposing the shoe to acids.

Steel safety toe box for heavier work.

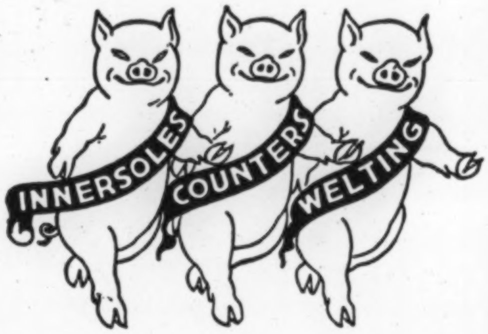
They Tanned Our Skins

to make

NEWFLEX

and

KUTWEL



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The best little pigs that go to market go to the Edgar S. Kiefer Tanning Co. to be tanned into important parts for good shoes.

Newflex innersoles and Kutwel counters, welting, and strips are made of Genuine Pigskin—flexible and soft for workability and lasting comfort—tough and durable to take hard wear. They're ideal for the ideal work shoes for America's womanpower behind the battle front.

●

Edgar S. Kiefer Tanning Company

GRAND RAPIDS, MICHIGAN

Sales: Chicago, 223 W. Lake St.; Boston, 42 Lincoln St.

America's vast orchards are an important "battleground" in agriculture's struggle for more "food for freedom." Orchardmen, like other farmers, are depending on women workers to a greater extent than ever before.

Lambert Photo

Shoes for Action for Women in Agriculture

THE Bureau of the Census reports for the year 1930 that there were 10,471,998 agricultural workers, of which 910,000 were women, or 8.7 per cent. A study of employment trends in agriculture reveals that an outstanding characteristic of agriculture during the past three decades is the decline in the number of farm workers. In 1910 there were 12,388,000 agricultural workers, of which 1,800,000 were women, or 14.6 per cent.

Total population between 1910 (91,972,000) and 1930 (122,775,000) increased 33½ per cent. In the same period there was a decrease in farm workers of 15½ per cent. However, the number of farms remained practically the same (6,361,500 as compared with 6,288,000).

Steady advancements in the development and use of machinery to displace workers on farms has in large part been responsible for the declining trend of agricultural employment, while improved methods of transportation and distribution of farm products has resulted in a lessened need for farm workers.

It is evident that the figures on women farm workers do not give a true picture of the potential market for work shoes as there are millions of farmers' wives and daughters who do farm work as well as housework. It is estimated that six million women, including farm housewives, do farm work and chores—constituting a tremendous market for agricultural work shoes.

Before anticipating the footwear needs of the women engaged in farm occupations, it is extremely important that some outstanding characteristics of agricultural employment in the United States be understood.

Recent studies of agricultural conditions by Government agencies generally distinguish between family workers and hired workers. To the shoeman, these two groups seemingly constitute a single market because they are engaged in identical labor under the same conditions. Their footwear needs, therefore, are identical, but the groups do not constitute identical footwear markets because of social and income distinctions commonly noted between the two which affect their footwear desires and their buying power.

Farm men are well provided with work shoes of various kinds, suitable for all of their work needs. Farm women are loud in their complaints that they are unable to purchase suitable work shoes.

Most women workers in farm occupations are now wearing footwear designed for urban use; footwear that is too heavy and uncomfortable for feminine use but is worn only because no more suitable shoes are available; or rubber and rubber fabric footwear of many kinds. In only rare instances are farm women wearing work shoes which could be called suitably designed and constructed for the purpose.

Government agencies and leaders of farm women's organizations concur that little of the footwear now available to farm women is ideal for work wear; only a small part is even passably acceptable; and most of it is highly undesirable.

High heels, narrow soles, open toes, open shanks, open backs, and most of the other fashion fancies of the urban women are entirely unsuitable for her rural sister, even for ordinary dress wear. Women on the nation's farms don't want "clodhoppers" but they do want shoes that are designed with some consideration for unpaved paths, snowy lanes, and working hours spent in fields and gardens and barns.

In general it may be said that the basic work shoe requirements of women in agricultural occupations are comfort, durable materials, sturdy construction, and styling adapted to the conditions under which the shoes will be worn.

Such a general summary is not enough, however, if the industry is going to do anything constructive about this branch of the neglected women's work shoe market. The urban market can be fairly well classified by major types and conditions of employment and by fairly well defined economic divisions. The rural market is entirely different.

The farm group classified as family workers includes farm operators and members of their families who work on their farms without wages. This includes farmers and their families operating produc-

On a sprawling Sierra Vista ranch in California's San Joaquin Valley these energetic harvesters include stenographers, actresses, authors, housewives, students, and salesgirls.

International News Photo

ble farms of greatly varying sizes. These are generally well informed about clothing styles, they have a solid social standing in their communities, and their incomes are large enough to enable them to pay good prices for their purchases.

The same general group of family workers also includes owners of unprofitable farms and their families, many of whom are hard pressed to secure such necessities of life as are not self-produced. In general, they spend more time working on their land than their more prosperous fellow farmers and less time in social activities. They must "shop closer" and they are looking for considerably lower priced merchandise.

A third sub-group of family workers includes tenant farmers and sharecroppers and their families. Some of these may be classed in a relatively high social and economic strata: mostly, however, they are the poorest and hardest pressed of all farm family workers and often they are poverty stricken, undernourished and financially unable to secure bare necessities of life except at the sacrifice of other necessities. They shop for the cheapest priced merchandise and literally "wear it out" before buying replacements. This subgroup cannot be ignored as a work shoe market, but it must be considered as an entirely different market on the whole from the first two subgroups mentioned.

Hired workers represent less than 25 per cent of the total workers in agricultural occupations, according to 1936 census reports.

Hired workers should be considered in three sub-groups: Regular workers, seasonal workers, and migratory workers.

The first group consists of hired workers who are engaged throughout the year as managers, foremen, or general farm hands. Their social and economic status compares with regularly employed industrial workers.

The second group consists of workers who are employed only through planting and harvest seasons and who are at other times of the year employed in non-agricultural occupations or who are wholly or chiefly unemployed in the off-seasons.

The third sub-group of hired workers includes the nomadic armies of migratory workers and their families who regularly follow the crops and the seasons through the farm belts; whose income is uncertain and whose standards of living are always insecure and often pitiful. They lack opportunity to identify themselves with normal community life and their family "shopping tours" depend entirely upon the possession of ready cash and purchases are frequently ill chosen. This army of migratory farm workers, even today, constitutes a social problem. The social problem is also an economic one for the nation as a whole, for if it could be solved in any reasonable degree a brand new market would and berries are leading crops a field type shoe would presumably be most satisfactory; a medium weight, oxford or ankle high shoe with a broad substantial sole. In the range areas the cowboy boot is and will continue to be, the most popular for both men and women. For truck gardens under dry working conditions an ankle high shoe similar to the field shoe seems most likely to be favored; if soil conditions are excessively damp or wet an ankle or boot height shoe which is at least partially moisture resistant will be needed. Workers engaged in such occupations as cranberry picking where the work is done in bogs or swampy areas will require waterproof or moisture resistant substantially constructed shoes of ankle or boot height.

One of the most frequent complaints is that very little footwear is available that falls between oxford and boot heights and that ankle high shoes are badly needed by women on farms. Oxfords are too low in many cases to properly support the ankle and to protect the feet from dirt and pebbles working into the shoe, while in many other cases boots are too heavy and uncomfortable. Gaiters and leggings are widely used by farm women, but their use does not obviate the need for more ankle high shoes, which would frequently eliminate the need for gaiters and leggings which are often only an uncomfortable makeshift for suitable footwear.

Another common complaint is that it is difficult for women farm workers to buy suitable work shoes in medium price grades. Many representative women said that they can secure more suitably designed shoes in very cheap grades or in very high grades than they can at medium levels. They add that the cheap shoes do not give satisfactory wear and that the high priced shoes are beyond the means of most of the farm workers. Here, it seems, is an opportunity for considerable study by manufacturers who can make good work shoes for women in agriculture to be retailed at $4.00 to $6.00 a pair, the range most frequently mentioned as not now being covered.

The foregoing presents a picture of the basic conditions which must be considered in planning work shoes for women in agriculture. It outlines a footwear need that has long existed. But the need is sharpened by war conditions and meeting the need is fast becoming not only an opportunity for the shoe industry to develop a new footwear market, but a challenge to develop *now* suitable footwear for women agricultural workers as a patriotic effort to aid the war effort as well as a logical business effort to cultivate new markets for the industry's output.

Shoes for Farm Women

By Mary E. Robinson

TO explain my position and interest in this subject, I am extension specialist in clothing in Missouri (Cooperative Extension Work, Agriculture and Home Economics, State of Missouri), working with approximately 50,000 women and 10,000 girls each year.

Each state has its own specialist (in many states two). In this way we come in contact with a large number of women. And we know what women want.

There's little rest this year for the feet of six million farm women. The women are growing gardens, caring for chickens, canning, storing vegetables in larger quantities than ever before. With the great labor shortage on many farms, there are the additional duties of running tractors and combines, helping with the harvest, taking care of live stock. Across the country, too, there is the new urge to save mileage, to save rubber and to win the war by walking.

In order to do their part well in performing the various duties, farm women want shoes which help do the job, as well as insure their health. Upon foot comfort depends a large share of the efficiency and happiness of their wearers.

These needed shoes will fall into two classes. First, the shoe for general wear which may be used as a walking shoe by any woman, clerk, teacher, homemaker. This shoe will follow the fashions of the day by having lower heels. A straight inner line, sufficient draft for the thickness of the toes, and length for the foot itself (at least ½ inch longer when standing) will make for more foot comfort. A snug heel and close-fitting instep are additional considerations.

The second shoe needed for active farm labor should have sturdy qualities. The general points in shape and fitting will be the same as for the walking shoe. Heavier uppers as well as soles are features in this more rugged shoe. The weight of this shoe may detract from its comfort unless it is built to fasten above the ankle as some "girl scout" shoes, thus helping to swing the weight away from the instep.

With these shoes, farm women will be more able to make their contribution to winning the war.

On every farm and in every community, women are taking over more and more of the men's work. Housewives are going into the fields to operate tractors and trucks and all manner of mechanized farm equipment. Girls are working at their mothers' sides and are helping their brothers in gardens and barnyards. The neighbors are pitching in and helping out. Women living in towns located in rural areas are backing up their husbands in uniform by helping out in the great job of providing food for courageous fighters, for busy civilian workers, and to aid our allies.

Women are the key to assured food supplies for the duration. They will have a greater part in the planting and harvesting of crops and a greater share in the farm tasks.

The importance of better work shoes for farm women is recognized by the leaders of those women. Miss Ruth O'Brien, chief of the division of textiles and clothing, Bureau of Home Economics, U. S. Department of Agriculture, wrote HIDE AND LEATHER AND SHOES in regard to this study:

"This Bureau has for the past year been designing various types of work garments for women . . . In this connection I have been impressed by the serious lack of suitable shoes for women now going into industrial and farm work . . . extension leaders of rural home makers complain of the difficulty farm women have in securing satisfactory shoes for field and other farm work . . . Well fitting, sturdy, protective shoes are a necessity if these women are to maintain their health and carry this extra load . . . I am delighted to see that in your publication, HIDE AND LEATHER AND SHOES, you are stressing the need of an immediate solution of this problem. We will be very glad indeed to do anything we can to help you in your efforts to get suitable shoes built for farm and factory workers and so widely distributed that they will be available throughout the country. *If this can be done, it will in our opinion be an outstanding contribution to the war effort.*"

Miss O'Brien's challenge to the industry to provide suitable footwear for women farm workers is not an be instantly opened up for many consumer goods, and especially for such personal necessities as shoes and clothing. Migratory farm workers can today be considered only as a marginal market for footwear designed for agricultural workers. If their economic status was improved they would be an influential part of the rural market.

Of course all migratory workers cannot be classed with those whose hardships have been portrayed by John Steinbeck and other writers of recent years. There are many whose status is higher than that of many industrial workers who are frequent victims of seasonal employment conditions and who at the same time lack some of the broadening influences which are felt by workers whose lives are not rooted in one spot.

It is obvious that all of these factors must be taken into consideration when planning to make shoes for agricultural workers and to promote their sale effectively. The shoes must be made in grades and price groups that will be acceptable to the various groups of agricultural workers, and they must be marketed in well defined seasons when demand and buying power are at their peak. Shoe buying in urban areas is on a day-to-day basis; in many rural areas it is restricted by seasonal trends.

The work shoe requirements of agricultural workers are as diversified as the agricultural occupations themselves. There is a vast difference between field work and garden work and barnyard work, and the footwear requirements of these jobs are also quite different. However, it is both practical and reasonable to design shoes that will meet the specific requirements of these various forms of agricultural work, because the farm worker will naturally select the type of shoe which best meets the conditions under which she works most of the time, and which will be reasonably satisfactory for the lesser periods of time spent in another occupation.

The creation of at least several basic types of farm work shoes is important if the field is to be properly served. It is also important that the recognizable demand in various farm sections be classified according to basic types most suitable in each section. In the dairying sections, the logical basic type to be offered would be one that was especially suitable for barn and barnyard work: moisture and acid resistant, slip proof, and ankle or boot high. In the dry grain and cotton sections and in dry areas where fruits

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Post-war FASHIONS in footwear will have a new meaning. . . , new feet to fit. . . . LASTS that must possess style combined with progressive consideration given to fitting qualities. Sterling has been devoting itself to the development of post-war ideas; surveying the industry and noting new and significant findings that will definitely be reflected in new features in wood.

Foresighted shoe manufacturers and retailers are cooperating with us in this development.

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idle one. She says, "the war has not only increased women's work with poultry, farm gardens, and dairy cattle, but also actual field work such as driving tractors, plowing and cultivating, and other work formerly done solely by men."

Elma E. Van Horn, assistant in home economics information of the Agriculture Department's Bureau of Home Economics, says:

"There is no type of farm work that women haven't taken over to some extent, according to Mrs. Minnie Fisher Cunningham, information specialist of the Agricultural Adjustment Administration. She tells me that she has seen women at work in the fields—all over the farm—in her various trips."

They Make Them for Men, Why Not for Women?

Dexter M. Keezer, former deputy administrator of the Office of Price Administration, submits the following comment which he believes will be of interest in connection with the discussion of women's work shoes. Mr. Keezer says:

"It was received by the Bureau of Home Economics of the Department of Agriculture from a rural district and bears a viewpoint pertinent to your study."

"To whom it may concern," the Department of Agriculture's correspondent addresses herself:

"Farm workers do most of their work on their feet.

"Really if food is going to win this war the farmers' wives and daughters will have to get in the collar and really work.

"They can't do a good job stuck up on Cuban heels. Neither can workers in defense plants. What I am interested in is proper shoes for farm workers. Low, wide flat heels on narrow shoes that fit. THEY MAKE THEM FOR MEN, WHY NOT FOR WOMEN AND GIRLS?

"We can buy some that fit, but they are not sturdy enough for rough wear . . . oh! the price.

"Most farmers are shy on cash, most of the time. They simply can't afford $10.00 to $15.00 per pair for shoes.

"It is all right for office workers to wear high heels, but have you ever seen a woman dressed in overalls with high heels . . . the same goes for slacks or any kind of pants.

"We ride horse back a lot. It costs us $15.00 a pair for riding boots to fit our narrow feet, and they are of too fine a leather to stand up under general farm wear, and are also too hot to wear in the summertime. We could not get any low shoes without having them made to order. Now is the time to help out the farm women's feet. Believe me, they will thank anyone who does it, from the bottom of their hearts."

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Shoes for Action . . . Basic Specifications

ON THE basis of this extensive study, HIDE AND LEATHER AND SHOES has prepared tentative specifications for basic women's work shoes suitable for wear under ordinary occupational conditions in factories and stores where no special conditions of employment exist. The original draft of these specifications was submitted to many leading shoe designers, manufacturers, foot health and other authorities for their study and opinions. The published specifications, appearing elsewhere in this report, were adopted only after careful consideration was given to the views of these authorities.

The specifications may be revised or modified in numerous ways to meet special occupational, climatic, and economic conditions in the markets where the shoes are to be promoted. These shoes do not require the use of strategic materials. On the other hand, they would contribute greatly to the war effort by making available suitable footwear for women workers who are now improperly shod.

Some manufacturers are already making shoes which could be classified and identified as work shoes, with or without some modifications. Others are making lines of footwear that could easily be broadened to include women's work shoes.

Miss Hildegarde Fillmore, style and beauty editor of *McCall's* magazine, says:

"I believe shoes for women workers should be divided into two groups: (a) Real work shoes, and that includes factory workers, farm workers, women in branches of the armed services who may be asked to do 'dirty work,' etc.; (b) Service shoes, which would include all the sturdy working shoes suitable for every kind of woman worker, from an office worker to a WAAC."

The Women's Bureau of the U. S. Department of Labor, urging more safe clothes for war workers, states that shoes for all workers in any job should be comfortable and sturdy, adding that "the thin play sandals favored by many workers are taboo—the worker's feet should be completely covered, and if she is working at a machine where objects might fall to the floor, she should be wearing safety shoes with a reinforced plastic toe."

Reviewing the "ideal" for women's work shoes, a leading shoe stylist said:

"The type of 'arch' shoe made as a comfort type for so many years is of doubtful value for work shoe construction. The narrow fitting tendency in these shoes has been gradually changing in recent years. Now it is taken for granted that women can be fitted in broader measurement lasts, and fitters do not follow the old rule of "fitting longer and narrower" when in doubt as to the correct size. Broad forepart, high fronted lasts (not walled but raised in depth over toes) are accepted as style and also for comfort shoes today. Heavy steel arches, and all those various talking points in arches and shanks are not half so important

The smiling girl at the left is cutting parts for storage batteries for submarines, tanks, and rough riding reconnaisance cars. America's fighting men are counting on her support, and proper work shoes will keep her smiling and on the job.

The girl at the right is turning out parts for Uncle Sam's fighting planes. If she slows down because her feet hurt, or takes time off to nurse a foot injury, the enemy is pleased. Good work shoes are as essential to women workers in war industries as jackets and protective headgear—but half of the women workers questioned by "Hide and Leather and Shoes" are wearing improper, uncomfortable, and unsafe shoes at their work.

OEM Photos by Bransby and F.L.M.E.

for work shoes as are broad measurements and easy fitting shoes that give adequate support.

"Actual safety shoes are something else again. Non-skid soles are just as important a factor in safety for some special uses as are special safety toes and boxings, etc.

"Ventilation is of great importance in work shoes, just as in nurses' shoes. Best nurses' shoe acceptance today is for those that have instep ventilators, in a closed up shoe, or perforations for greater coolness; especially important today in cemented construction shoes. Workers who sit for long hours at machines are especially interested in ventilated shoes.

"One single comfort feature workers seem to like is a cushiony feel in forepart."

Interest in footwear worn by employes is rapidly increasing and many plants do stipulate the types of shoes that must be worn by workers. These are mostly, however, firms making war materials with special occupational hazards of fire, explosion, etc., existing. Other employers recommend the wearing of suitable work shoes and have educational literature and posters in the factories stressing the need for good work shoes.

Among this latter group of employers is the Republic Aviation Corp., Farmingdale, Long Island, N. Y. This company gives all new female production employes a mimeographed form which includes general instructions on clothing to be worn at their jobs. The instructions state:

"Sturdy shoes with broad heels not more than 1½ inches high should be worn. Rubber heel tips and stiff toe boxes are recommended. Open toes, open heels, and sandal types are not permitted." Miss Lois L. Ferris of the company's personnel department says that, in addition to advising its employes, the company has arranged for a local merchant to carry safety shoes for women made by two large manufacturers, and she reports:

"A number of pairs of both brands are in use in the factory and our report to date has been entirely satisfactory. There are no special hazards to which women in our plant are subjected which would require any factor not incorporated in these shoes. We do feel that the support afforded by the 1¼ inch heels is valuable in an industry where workers are on their feet as much as they are in here. Models of both these shoes are on display in the induction room and all new female employes are given advice on proper shoes and proper support of feet at their induction meeting."

Dr. C. F. Schmidtmann, secretary-treasurer of the Foot Health Foundation, Omaha, Neb., declared:

"Our past research has revealed that much fatigue and inefficiency is brought about by improper footgear of the workers. We now find many girls wearing boys' shoes, and as you know fit and widths are hard to find. The end result is that foot 'conditions' are on the upswing. You are doing a noble work in attempting to solve some of the problems confronting us today."

In a recent paper on Podiatry in Industry, Dr. Schmidtmann said: "Many avoidable occupational conditions exist, examples of the individuals so affected are: salespeople, letter carriers, school teachers, policemen, lathe men, waiters, file clerks, and punch machine men, whose feet are subjected to the most gruelling conditions, since it is expected that in most instances they have what may be termed a better dressed foot. . . . In group examinations, it is found that many of these

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conditions have not been considered severe enough to report to the infirmary, clinic, sick call, or physician. Yet they are the beginning of faulty posture and are the cause or etiology of a multitude of chronic conditions.

"Some of the more common are: Backache, joint and foot strain, intestinal stasis, auto intoxication, impaired circulation, pelvic congestion, muscle spasm, scoliosis, lordosis, prolapsis of the uterus and ovaries, faulty gait, retroflexion or retroversion of the uterus, all of which would have more or less effect on the general efficiency of the individual.

"Industry would profit decidedly if workers could be educated or requested to have periodic foot examinations by a competent podiatrist, just as strict attention is given to the teeth, eyes, heart and lungs, and where indicated, proper treatment should be instituted."

Dr. Schmidtmann listed 84 specific conditions which were found in the examination of 5,200 workers, conditions which were severe enough to command attention and cause loss of time.

After a number of months' study, the American Standards Assn., New York, has completed the project which it undertook at the request of the War Production Board and the Office of Price Administration; the compilation of "American War Standard Specifications" for women's safety toe protective shoes. The Association has prepared a draft of its standards, which is intended for use during the war effort.

Although the present standards cover only protective footwear, it is believed that standards may be developed later for other types of work shoes for women, with special attention being given to types of industrial footwear which do not require special safety features and in which the incorporation of special safety features would involve unnecessary expense and consume vital materials.

Representatives of 90 per cent of the American shipbuilding industry have recommended standards for clothing and personal protective equipment for women shipyard workers. The recommendations covered a broad field of work clothing, and some were of particular interest to the shoe industry.

Welders' garments, the recommendations state, should include a flame proofed coverall or a two piece outfit consisting of wool trousers and shirt, plus a flame proofed welder's leather set. Welders' leathers should be the same for women as men's leathers except that they should be styled to fit the feminine figure. Experience indicates the necessity for extra ventilation in welders' jackets.

It is recommended that all production workers except welders and burners wear gloves of a material suitable for the work being done, such as cotton, canvas, leather, leather palms, and gloves with or without gauntlets. For welders and burners it is recommended that leather gloves with gauntlets be worn, but that they be provided with an elastic wristlet, set one-third the distance from the top of the gauntlet, that will closely circle the wrist above the bottom of the shirt cuff and prevent the entrance of hot slag into the glove.

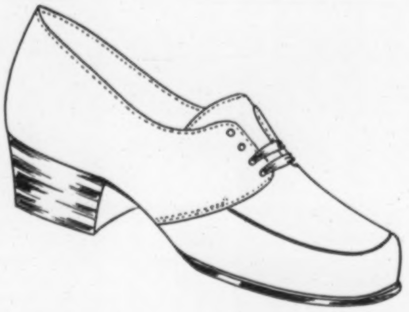
Rugged safety shoes are recommended for all employes. The shoes should be made of leather comparable to that used in men's shoes, and provided with steel or plastic toe caps. All shoes should have low heels, leather or corded type soles and heels, and safety shoes should comply with the American Standard Code. Oxford types are recommended for general employe wear, and high shoe types for welders and burners. Pull-on boots with a strap across the instep are also suggested.

Shoe retailers and department stores are promoting women's work clothes extensively. Some chain units and independent retailers are working with officials in local industrial plants—particularly in war industries—and are featuring in various ways recommended types of work shoes, frequently arranging for bulletin board announcements, pay envelope advertisements, and factory displays of the shoes carried in stock for women workers.

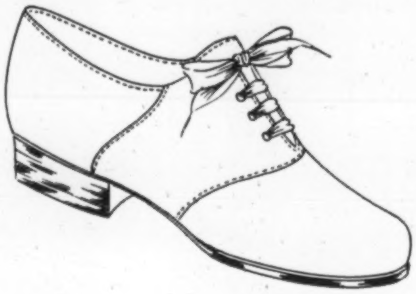
Leading department stores throughout the country have installed special departments well stocked with work clothing for women, and report that these departments are very popular with women workers. Some of these departments carry a variety of shoes suitable for work wear, some carry only protective work shoes, and some have not yet included shoes.

Employers are giving the women's work shoe problem a great deal of attention at this time. Plant managers, safety directors, and personnel heads are studying suitable types of footwear for each occupation and many are making specific recommendations to the workers. In a few cases, the wearing of protective footwear is mandatory; in many cases the wearing of open shoes is prohibited.

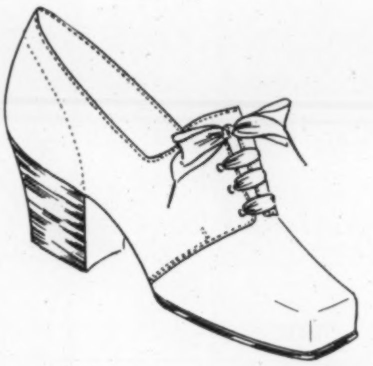
The recommendations of the employers and the preferences of the workers cover a wide range of shoe types, varying generally according to the nature of the work and the protective requirements involved. Sport shoes with medium and low heels are gaining in popularity among women workers who require only comfortable, well made shoes with safe heels.



The moccasin type shoe with a 10/8 or 12/8 heel is a popular model for women workers and is now made by many manufacturers, but not identified as a work shoe...



The saddle oxford with a 10/8 or 12/8 heel and a plain toe is one of the most popular shoes now chosen by women in many occupations...



Smart styling can be achieved in women's work shoes such as this four eyelet military oxford with a 14/8 heel...

HIDE AND LEATHER AND SHOES'

Specifications for Basic Women's Work Shoes

Suitable for wear under ordinary occupational conditions in factories and stores where no special condition or hazard of employment exists. Including basic requirements of footwear for agricultural workers.

General—No leathers or other materials required for military use should be used in the production of women's work shoes.

Construction — Chief requirements are that the shoe be comfortable and durable throughout its life in work wear. Goodyear welt construction generally preferred but other constructions may be satisfactory if they meet the basic requirements and provide proper support for the foot.

Lasts—Must provide sufficient room for comfortable fit at all parts of the foot. The type of lasts now commonly used for growing girls' and sports oxfords and similar types of footwear is the most satisfactory if the shoe is fitted properly. Nurses' shoe lasts do not meet all the requirements of general work wear. Orthopedic and health shoe lasts not generally satisfactory for women's work shoes as they are made for special foot conditions and should not be commonly used for normal foot conditions. Round toe lasts, providing ample foot room across the ball and ample height at toe and instep are preferable. Square toe and wall lasts considered acceptable by shoemen but not particularly liked by workers. Lasts with pointed toes, low toe and/or instep, excessive swing, etc., not acceptable.

> **"I consider these specifications ideal and I sincerely hope that some of the country's progressive manufacturers will go into production on women's work shoes immediately. Such footwear will be extremely helpful to those women employed in war industries to maintain their foot health, to prevent accidents caused by inadequate and worn out dress shoes, and to improve their efficiency and morale by keeping their feet and footwear out of mind.**
>
> **"I would recommend a special bulletin describing and illustrating women's work shoes to be sent to the personnel department of every plant where any sizable amount of women are employed on war work."**
>
> Dr. Joseph Lelyveld,
> Chairman,
> National Foot Health Council

Patterns—Four or five eyelet oxford patterns most desirable. There should be no inside seams in moccasin type shoes. Five eyelets are preferable to four in oxford types because of the added support they give to the foot. Variations of these are acceptable. Elimination of seams, overlays, trims, etc., that may cause pressure or chafing should be carried out as far as possible. Simplicity and comfort most desirable factors. Open toes, heels, shanks, etc., not acceptable. Cutouts generally undesirable. Perforations satisfactory for most working conditions and very desirable for summer wear or under work conditions where excess heat is present.

Upper materials—Soft, durable, medium weight leather preferred. Desirable leathers include side upper, kips, calf, kid, horse, and splits if of satsfactory weight, etc. Fabrics, plastic materials, etc., undesirable.

Sole — Flexible, medium weight leather soles preferable for most work conditions. Heavier or lighter weights

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SAN FRANCISCO—1239 Howard St.—A. B. Boyd
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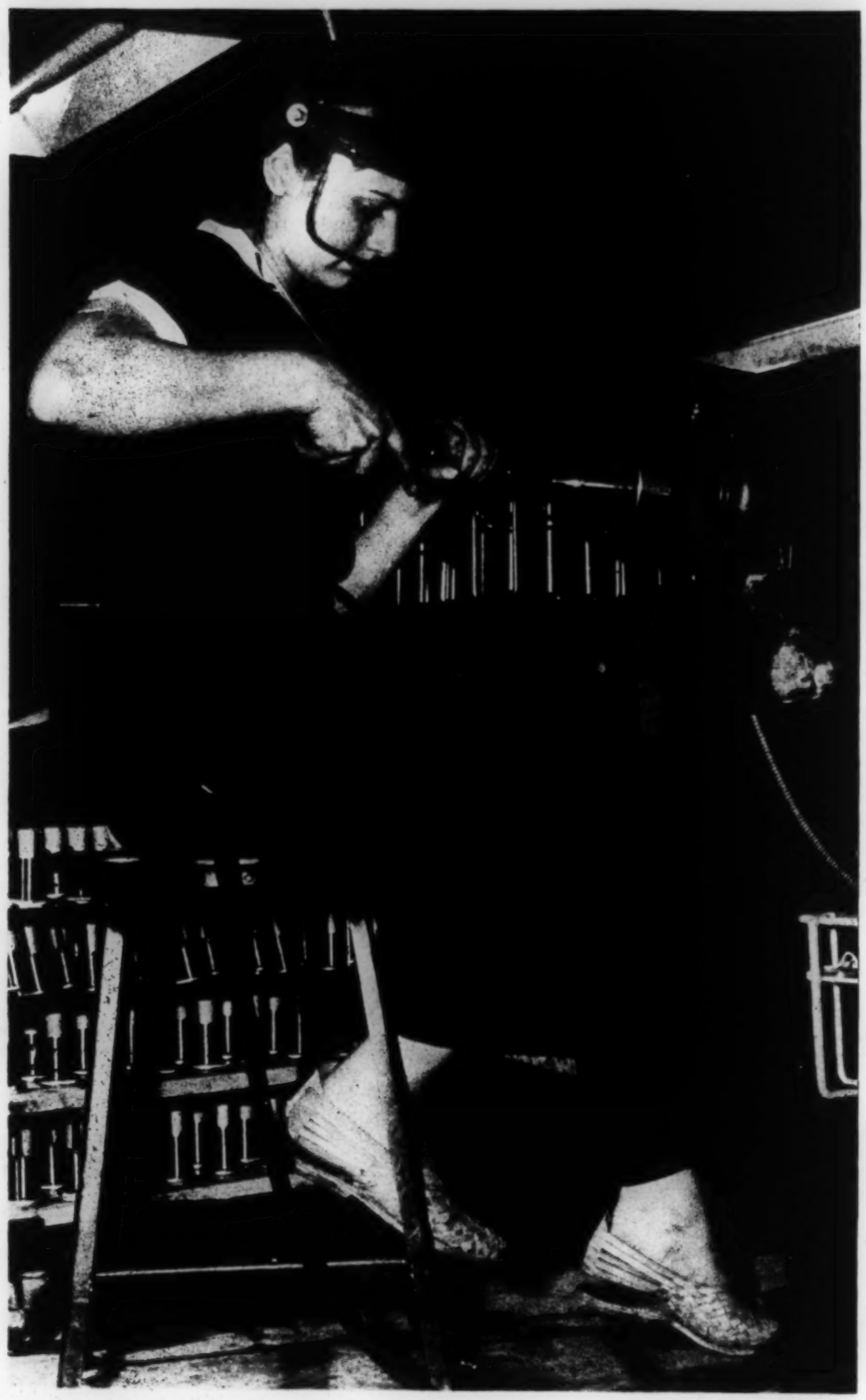
These Are NOT Shoes for Action!



This picture of an essential war worker whose feet are shod in flimsy huaraches that invite foot crippling and body injury, is a graphic portrayal of the great need for suitable work shoes for women. With no previous industrial experience this girl mastered the operation of this compressed air machine in record time, and is now polishing airplane motor parts with speed and skill. Her skill is too valuable to be lost even temporarily, and her employer should have watched the shoes she is wearing as well as the parts she is polishing.

Official OWI Photo by Ann Rosener

sometimes more desirable. Rubber acceptable for some conditions but not generally desirable. Most important requirements are good support, flexibility, and foot protection. Wood soles desirable for many types of occupational wear and acceptable for many others. Flexibility should always exist at the ball area, the natural hinge of the foot.

Heels—Built up heel with rubber toplift most desirable and advisable. Medium and low heel heights are preferred. Either is satisfactory to foot health authorities, shoe manufacturers, and designers. Many workers prefer medium heels because they are easier for pedal control of machinery and are a less pronounced change from high heels worn for dress. High heels of any kind are not acceptable; heel heights should not exceed 14/8.

Shanks — Broad shanks furnishing strong support to the foot are necessary. Steel or combination shanks are preferable. Wood shanks acceptable if conforming to basic requirements.

Arches—Special attention to proper fit and support of arch is necessary. Unusual types of arch supports such as are often used in "comfort," "health," and orthopedic footwear are not generally desirable for ordinary work wear as they are not specially suitable for normal feet under general conditions.

Special features—The special appliances, pads, supports, and other features which are frequently used as sales incentives in the promotion of orthopedic, comfort, and health shoes are not generally desirable for work shoes. A well constructed and properly fitted shoe is more desirable than one which includes needless "gadgets."

Counters—Medium height long counters are most satisfactory for ordinary wear. Should be flexible and designed to prevent chafing while furnishing good support to the back part of the foot.

Box toes—Should permit ample toe room and be made of materials that will not crush or collapse under normal wearing conditions. Chafing of toes or foot by box toes should be guarded against. Steel or plastic box toes are required for safety shoes.

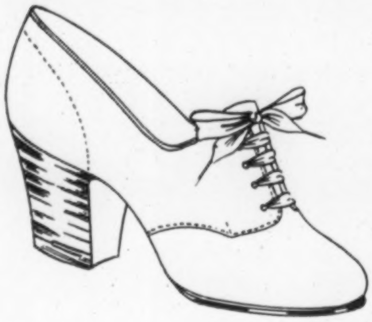
Linings—(a). General—All lining parts must be of good quality to provide proper service under the conditions of wear to which work shoes are subjected. They should be smooth with few seams and no wrinkles. They should provide maximum porosity without loss of strength and should not be unduly affected by excessive perspiration which may be found in work shoes after relatively limited periods of wear. Materials selected for work shoe linings should be carefully tested for tensile strength, burst resistance, resistance to perspiration, resistance to cracking and wrinkling, porosity, and elasticity without abnormal stretch. Bulkiness is a factor to be avoided.

(b).—Between Lining: An interlining of drill or twill placed between the outside of the upper and the quarter lining, especially in five eyelet oxfords and similar patterns, will reinforce the upper and will help hold the upper shape through extended wear.

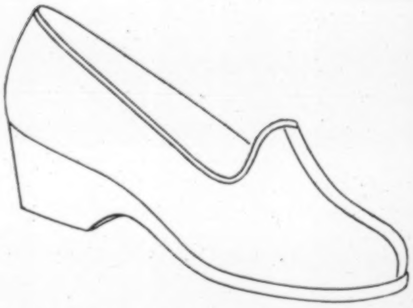
(c).—Counter Pocket: The counter pocket in an unlined shoe should be good quality leather that will hold the counter firmly in position, will not tear, and is so attached that it will not chafe the foot.

(d).—Doubler: The use of doublers in women's work shoes, to secure additional plumpness in the forepart of the shoe, and to increase the shape holding qualities of the forepart, is recommended for women's work oxfords. Flannel and cotton nap doublers are recommended for unperforated shoes; artificial leather or coated fabrics for perforated shoes. Drill and sheeting doublers are acceptable. Paper

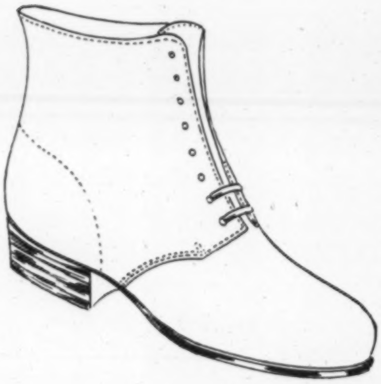
These ARE!



This five eyelet oxford with 14/8 heel and plain toe provides the wearer with foot support, a heel that is convenient for operating many types of machinery, and a toe that insures comfort...



"Loafer" type shoes provide comfort and protection for women workers...



The ankle high boot with plain toe and low heel is needed by agricultural workers...

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and paper backed fabrics are unacceptable.

(e).—Heel Pad: A cushion pad, made with an underlay of felt or similar material, is recommended for extra comfort and protection against chafing and irritation of the bottom of the heel. Leather, artificial leather, or coated fabric pads are acceptable. Paper pads are unacceptable.

(f).—Heel Stay: The heel stay should be made of medium weight leather of good strength, inserted with the flesh side of the leather coming against the foot, and having no seams or ridges that will chafe the foot.

(g).—Quarterlining: Should conform closely to all the requirements for linings in general. Some foot health authorities believe leather linings are undesirable because two pieces of leather with flesh side together limit the porosity of both pieces and prevents the normal stretch and elasticity of the leather. They hold that unlined shoes also may be undesirable because the flesh side causes stocking drag when the feet become warm or moist; this was evidenced by a test made among 450 women workers in 16 laundry plants. These authorities favor a cotton drill or twill fabric quarterlining for all work shoes. Other authorities prefer for general work wear a shoe with a soft, porous leather quarterlining, with plain or coated fabrics deemed acceptable. For high boots, cotton drill or twill, faced with leather or artificial leather at the top and sides, is recommended. Artificial leather and coated fabrics are acceptable for quarterlinings of low shoes provided they meet fully the requirements outlined in the general lining specification.

(h).—Skeleton Lining: If a fabric quarterlining is used for oxfords a skele-

Felt..

TONGUE LININGS
SHOE FELTS
HEEL PADS

Felt for

Uppers	Slipper Lining
Box Toe	Flexible Sole
Insole	Combining
Cushion Insole	Compo
Shoe Rack	Mulling

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WESTERN FELTS

ton leather lining to reinforce the edges is preferable.

(i).—Socklining: Any leather, artificial leather, or coated fabric having good wearing qualities is acceptable. Paper linings are unacceptable. Cushion linings are recommended if added protection against foot chafing is desired. It is extremely important that wrinkles and poorly adhered socklinings be avoided.

(j).—Tongue Lining: Leather, artificial leather, and soft fabrics, drill, or twill acceptable. Most coated fabrics are not acceptable because they are not soft and flexible enough for the purpose, or crack easily. Bulky tongue linings should be avoided.

(k).—Vamp Lining: Cotton drill or twill are preferred for unperforated work shoes; leather, artificial leather, or coated fabrics are recommended for perforated shoes, but these must conform fully to the requirements specified for linings in general.

Insoles—Flexible leather insoles of good quality preferable. Bonded fibre or synthetic insoles acceptable. In the interest of leather conservation the acceptable fibre insoles are expected to be used extensively for women's work shoes, especially in price grades where it would be too expensive to use best flexible leather insoles. Poor quality leather insoles and unbonded fibre materials of any kind are unacceptable.

Workmanship — Careful workmanship is important. All operations must be performed so that accurate fitting is accomplished. Wrinkled linings, heavy seams, rough insole surfaces, crooked seams improperly placed counters and box toes, insecure heel attachments, etc., must be guarded against.

Modifications for special conditions —The basic work shoe can be readily modified for special work conditions. Boots are wanted for a few occupations. Wood or rope soles may be used. Safety steel box toes are essential where special foot hazards are prevalent. Spark-proof construction is required where danger of explosion is present. Such occupational conditions require special study and attention.

Farm shoes—The creation of at least several basic types of farm work shoes is important. In the **dairying** sections of the country, the basic type should be one that is especially suitable for barn and barnyard work; moisture and acid resistant, slip proof, and ankle or boot high. In the dry **grain and cotton** sections and in dry areas where fruits and berries are leading crops a field type shoe is most satisfactory; a medium weight, oxford or ankle high shoe with a broad substantial sole. In the **range areas** the cowboy boot is and will continue to be, the most popular for both men and women. For **truck gardens** under dry working conditions an ankle high shoe similar to the field shoe is required; if soil conditions are excessively damp or wet an ankle or boot high shoe which is at least partially moisture resistant is needed. Workers engaged in such occupations as cranberry picking where the work is done in bogs or swampy areas require waterproof or moisture resistant substantially constructed shoes of ankle or boot height. One of the most frequent complaints is that very little footwear is available that falls between oxford and boot heights and that ankle high shoes are badly needed by women on farms. Oxfords are too low in many cases to properly support the ankle and to protect the feet from dirt and pebbles working into the shoe, while in many other cases boots are too heavy and uncomfortable.

General Recommendations — Types of female employment in sections where manufacturers' shoes are most commonly distributed should be ascertained and the occupational conditions prevalent in those types of employment should be studied and analyzed. Several shoes should be specially designed to meet the requirements of the workers in the market to be developed, so that variety of fit and design may be offered. Complete size ranges are highly important, and provision should be made to fill special sizes from in-stock if necessary at only a slight extra cost to the consumer. Care should be taken to embody in all work shoes the essential details of design and construction and to coordinate these details with those prevailing in dress shoe types, so that the change from work to dress shoe wear and vice versa will not tire the feet or induce an awkward gait. It is also recommended that women's work shoes should be fitted larger than the usual dress shoe size, as the foot expands under pressure of standing or operating machine pedals when working in warm rooms.

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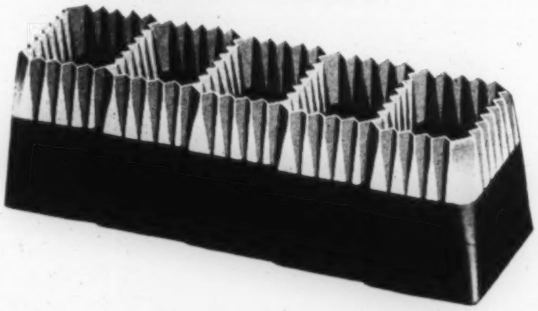

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Distribution of Shoes for Action Big Problem

WHEN it comes down to real facts, it is shown that even within the walls of wartime factories, there are many operations and types of work done by women with no particular hazards involved. But there is still one-track thinking about proper shoes for employed women. This is indicated in certain Governmental reports, in suggestions from authorities on health and safety, as well as within the shoe industry. There is a tendency to accept one type, the six-eyelet blucher, with one specific safety feature, the steel or plastic toe box, as the one shoe which will answer all the footwear needs of employed women.

In one out of 10 occupations a safety toe shoe is essential, in the other nine, shoes with other types of foot protection or safety details are desirable. But all the women in the great ranks of millions employed are subject to common foot strain and consequent loss of efficiency if improperly shod. And most of them are! All the surveys show that; all the specialists in industrial health make impassioned pleas to get the right shoes for working women, and the women want them.

The immediate steps to improve this condition are being taken. Already we have an enormous upsurge of interest within the shoe industry. Many good shoes are on the market. Many shoes of correct type are being worn by the women in the factories. But in plants where they accept mandatory work garments with good grace, they still wear the wrong shoes. *The biggest problem involved is the distribution method to be carried out.* Correct types of shoes must be made easily available to these women. Up to now they have had little opportunity to buy the right types of shoes. Company stores very quickly eliminate shoes from the list of items sold within the plant. Too hard to fit; endless refittings and returns; unable to carry sufficient stock in sizes required.

The women themselves are being rapidly converted to the wearing of safe, sane clothes. Through the press, on women's pages, over the radio, in the women's magazines, even in the great weeklies, women are being told of their importance in the new schemes of industry. Incidentally, they are being exposed to the most potent type of high-powered publicity because they see countless pictures of women in all the new trades, wearing the uniforms of those trades.

They are bound to be influenced by this type of educational material. And while the same problem has beset the shoe industry for as long as most of us can remember—getting women to wear the correct shoes for the job—chances are that they are going to be easier to teach in a shorter time, now that this national promotional campaign is under way. Shoe trade Utopia, now and after the war, when women no longer wear old bedroom slippers in the kitchen or in the factory!

In the past few months a change in the processing of women's industrial clothing has been made in many of the larger plants all over the country. Previously they had started out, when uniforms were first adopted, to supply the initial outfit, with shoes, at cost. In a few plants mandatory safety clothing was supplied gratis, with shoes at cost. In many plants, where garments such as overalls or slack suits or coveralls were provided, women flatly refused to wear them. It turned out that these models were incorrectly designed. Either they were uncomfortable, or extremely unbecoming. In one instance they were impractical. The male workers dropped wrenches down the loose drop-seat pants of the coveralls and threw nuts and bolts down their low V-neck blouses!

Local department stores have shown willingness to install special departments of specified clothing, accessories, and shoes, to facilitate the uniform outfitting of female workers. The women may shop in the store, or once a week the store sends a staff to the plant. Clothing is marked at prices representing a smaller markup than usual. Alterations are often included in the selling price, with certains exceptions for more costly types.

The larger plants all over the country, that have changed their method of uniform supply in recent months, have all worked out a cooperative plan with some local store. Only in ordnance and powder factories, in Government arsenals, chemical war plants, food processing plants, and where special protective clothing is mandatory, as for welding operations, are they continuing to provide women workers with uniforms from company stores. In certain occupations plant management is compelled to supply all everyday workers with fresh uniforms laundered on the premises. But the new development is towards providing in local stores everything in garment needs for the workers.

Shoes the women workers prefer, and styles they would like to wear, are not as impractical, strange to relate, as statements of some experts would have us believe.

The pooled ideas of these women on the industrial front have been studied in relation to the various occupations in which they are engaged, the hazards involved in them, and the most popular and acceptable uniforms now being worn. The seven garment types, with their variations, as allowed priority by the Work Clothes Order issued by the WPB in Nov., 1942, plus other styles such as skirts, culottes, and jumper outfits not included in the Order but in wide acceptance; also specific uniforms endorsed by individual plants—all of these were considered in evaluation of the new types of footwear that must now be provided to wear with these clothes.

It is important to mention that, contrary to the expressed viewpoint of many men who have been striving to get the right shoes on their feet, these girls are emphatic in their rejection of either shoes or uniforms that smack of the fashionable. They state in no uncertain terms that they have no desire to be fashionable on the job. They want to look efficient, they want to feel comfortable, and they want to play safe. Lipsticks they still cling to, and some of them protect their long ruby-color nails with adhesive tape; some of them even wear Lana Turner sweaters right over their uniforms, but the majority are like the young woman in the parachute factory.

"I want shoes that will help me do my job better. Shoes that will keep me efficient—can't make mistakes in this work; shoes that will protect my feet, when I'm near machines or just standing for long periods," she explained. "But I don't want the kind of shoes that tear me down; the kind that make me feel sorry for myself when I look down at my feet and see what I have on them."

What she said spells *efficiency, safety, health* and *morale.*

Safety and Protective Features Important in Occupational Shoes for Women in Occupations Cited

Protection against extremes of heat or cold, with insulated shoes made with cork, felt or rubber platforms, or cushion insoles.

Resistance against dampness, also moisture and humidity; special treatment of shoes for farm work impervious to action of manure. Soles of special types, also upper leathers treated with oils as used in the Army, to give better wear and resilience.

Protection against common foot strain and bodily fatigue, by shoes with cushioned foreparts, pear-shape cushioned heels; regulation steel arch for ordinary types of employment such as teaching, nursing.

Conductive and non-conductive features in shoes, to protect against sparks and explosions in arsenals, ordnance plants, laboratory work, nursing. Special conductive constructions also non-conductive models with no metal tacks, eyelets, shanks, buckles, etc., and soles of reclaimed rubber, cork, or cork compounds; platforms with leather wood or rope outsole.

Protection against metal splinters, punctures, powder stains and burns, action of oil, alkaline or acid substances, on shoes made of firm leathers, treated with coating of shellac or oil. No openings in shoes except at side, and worn with button cuff slacks or jodhpur cut trousers fitted tightly over shoes. Boilable knee high socks and ankle socks.

Protection against discomfort in sitting or standing operations; no shoes with rubber gores, elastic inserts or stretchable leather, or use of plastics or heavy coated fabrics and leathers in upper materials.

Protection against heavy machinery, falling objects; shoes made with steel or plastic safety toes. Also with regulation shoes worn with metal toe, ankle or leg guards in addition. Side laces, or shoes minus laces in occupations where laces might catch in machine.

Protection against bad posture habits, by means of moderate and low-heel shoes, extremely flexible yet with a solid base structure, for reaching, standing and pedal operations.

Detailing of shoes with firm foundation, extremely soft and resilient upper construction for workers in precision operations requiring sustained concentration. Also types of soles to protect against falls on wet or dry slippery floors, suction rubber, composition, rope, wood patented non-skid soles.

Protection against dermatitis, by use of closed up shoes, made with firm yet porous upper leathers and with linings especially treated to resist bacterial growth.

Types of Protective and Safety Clothes Worn by Women Workers in Civilian and War Production

*WPB Priority as of Nov., 1942.

Slacks* with jackets,* blouses,* shirts.*

Coveralls* and overalls, worn over shirts* or with sweaters and cotton pullovers for warmth.

Aprons,* dresses* in wraparound and coat styles.

Smocks and tailored shirtwaist dresses.

Jumpers and pinafores worn over tailored cotton knit pullovers or woven cotton shirts.

Slack suits* in one-piece models that look two-piece. Culotte suits.

Flame-resistant cowhide aprons, shirts, slacks and coveralls for welding operations.

Water - repellant coveralls and aprons for special type protection in extremely wet, humid, or steamy conditions.

High, stiff head coverings, visor caps, turbans made of fireproofed and flame-resistant materials. To cover hair completely.

Plastic, metal, and plywood helmets treated for flame resistance.

Goggles, protective glasses, and facial masks for chemical plants and welding operations; various industrial uses.

Work gloves, metal - reinforced gloves, plastic cuff gloves, rubber gloves, for various protective uses.

Metal ankle guards, leg guards and arm guards. Also plastic guards to resist action of sparks, acids, hot liquids, caustics.

Knit cotton or rayon underwear to be washed daily as protection against dermatitis. White cotton or lisle knee-high socks that can be boiled if necessary, worn with darker color ankle socks, with slacks, coveralls, overalls. Regular length stockings for occupations not especially hazardous.

Note: Special weaves of rayon and the great range of durable cotton fabrics that can be washed frequently and still stand up are approved for work clothes. Processed cowhide, horsehide, and sheepskin in buffed surface resistant to liquids or flame, are essential worn over the cotton suits in some operations.

In Such Occupations As

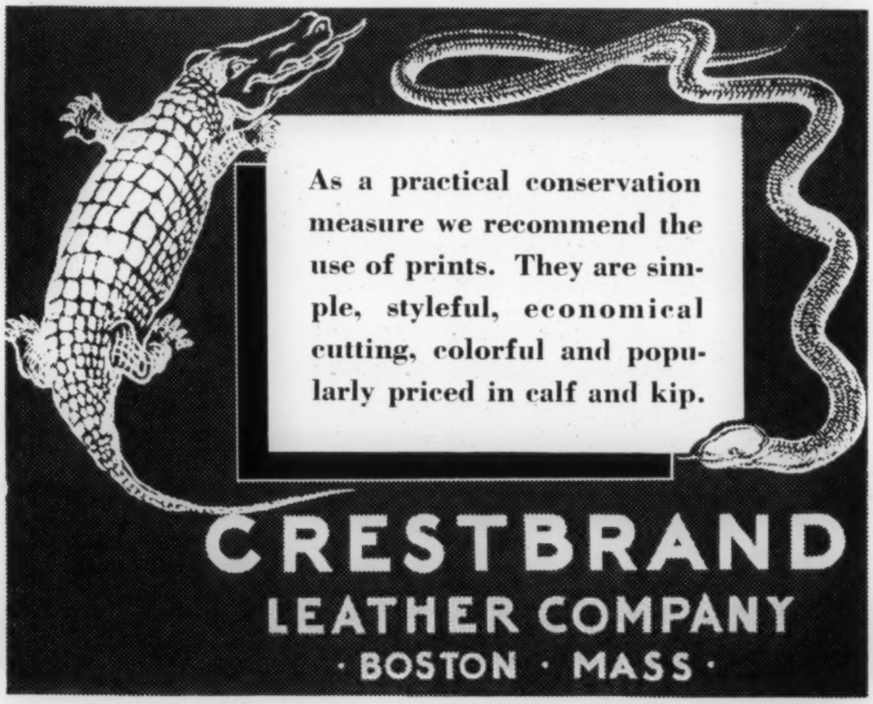
Arsenals
Assembly work
Baking
Chemical Warfare
Cooking
Dress Manufacture
Food Processing
Hosiery Mills
Men's Tailoring
Ordnance
Precision Work
Textile Mills
Welding

Plants Making

Airplanes
Bomb Sights
Gas Masks
Jeeps
Machine Tools
Motors
Munitions
Tanks
Parachutes and Life Rafts
Wire for Signal Corps

Replacing Men

Chemists
Conductors, Bus Drivers
Cooks
Dairy and Farm Work
Elevator Operators
Expressmen
Gasoline Stations
Laboratory Workers
Messengers
Packers
Pharmacists
Soda Jerkers
Taxi Drivers
Truck Drivers


As a practical conservation measure we recommend the use of prints. They are simple, styleful, economical cutting, colorful and popularly priced in calf and kip.

CRESTBRAND
LEATHER COMPANY
· BOSTON · MASS ·

Much Has Been Done . . . Much Remains Undone

THE development of standards for women's protective footwear is a tremendous step forward in the development of a whole new classification of womens' footwear—women's work shoes. It is not, however, the whole answer to the problem of providing women with suitable footwear for their working hours. The women who need and will buy protective work shoes constitute a small percentage of all employed women. For every woman who needs safety toe shoes there are hundreds of women who need only shoes with good sole and heel tread, substantial construction, durable upper leather, patterns that provide foot support, and all-over comfort.

What has been done to provide proper shoes for these women—the women who in the past have constituted a large and undeveloped potential market for work shoes, and who will be needing work shoes long after this war is over?

There have been many gains made in this respect. These can be summarized somewhat as follows:

1. Most important gain has been that of shattering the ancient prejudice against the term "women's work shoe." When this study was started it was almost sacrilege to speak of women's work shoes as such. Today that is not true. Many shoemen still prefer to talk about "service shoes," "duty shoes," "occupational shoes," "functional shoes" or "vocational shoes" but they will admit that what they are describing are basically work shoes. The importance of this gain cannot be underestimated.

2. Definite standards have been developed for protective work shoes. These standards will insure the development of properly protective footwear for the women who need it.

3. Specially designed work shoes, made along the lines of sports oxfords, walking shoes, health shoes, etc., have been partially developed. These shoes retain the satisfactory features of their basic types and include additional features of special interest for work wear.

4. Manufacturers who are now making shoes suitable for work wear are emphasizing this fact in their promotion and advertising.

5. Many retailers, some with the encouragement of their suppliers, are studying the work shoe needs of their feminine customers and are stocking and advertising shoes that will serve those needs.

All of these gains are important because they inspire a hope that the day is coming when women's shoes that are suitable for work wear will be classified as work shoes and so distinguished from the dress types. They indicate that manufacturers will give more attention to work shoes in the future than they have in the past. They indicate that working women will find it easier to locate suitable and identifiable work shoes.

These gains are not enough. Furthermore, they are being confused, and could be nullified, by the clamor of some manufacturers to get on the band wagon of the work shoe demand whether or not they have suitable footwear to offer. The flimsiest types of huaraches and playshoes are being offered as work shoes without an apology. Recommending such footwear for any form of ordinary shop or commercial work is misleading; promoting it for war work and other occupations where many foot hazards exist is nothing short of criminal.

The promotion for work wear of common sport oxfords, walking shoes, orthopedic shoes, and similar types is widespread. These shoes have many points to recommend them as work shoes, but most of them should be better developed with more attention to work wear needs and less attention to trying to develop an all purpose shoe. They are filling in the gap between no suitable work footwear and the day when women's work shoes will come into their own as a definite classification of women's footwear.

The scoffers who still feel that women's work shoes have few possibilities, who still believe that all purpose shoes—or worse—will fill the need, should be reminded of the easily made and highly profitable nurses' shoe. Based upon the lines and specifications of common walking and health type shoes, the nurses' shoes "went to town" when they were given some added features to make them attractive to nurses, and when they were identified with their purpose by the simple expedient of calling them by their right name.

Millions of new female employes are working in factories, shops, restaurants, offices, and hundreds of widely varied occupations. The working girl is no longer the tolerated, and frequently exploited, "gainfully occupied" woman. Today she is the backbone of American industry and commerce and what she wears, what she eats, and what she thinks are nearly as important as how she works.

Much has been accomplished:

Rugged ~ Heavy

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FOR WOMEN'S WORK OR
SPORT SHOES

SLATTERY BROS. TANNING COMPANY
210 SOUTH STREET BOSTON, MASS.

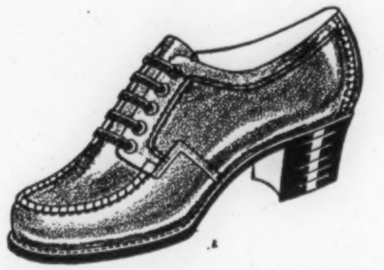
much remains undone in the provision of suitable work clothing for women, and particularly in the provision of suitable work shoes.

A year ago it would have been difficult to compile a very comprehensive list of manufacturers who would be willing to be considered as sources of supply for "women's work shoes". Today there are some leading firms who have selected from their standard lines the shoes most suitable for work wear, or who have developed special shoes for work wear, and are offering these to their distributors primarily as work shoes. This is a tremendous advance. Still more important, most of these firms are not only cultivating the immediate war-created demand for work shoes, but are also looking ahead to the post-war market, and to continued development of a field that has been so long neglected.

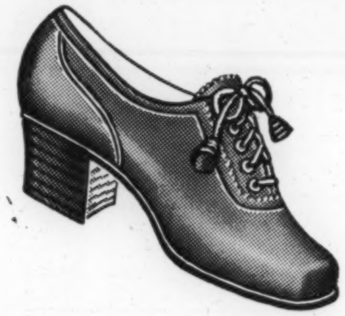
Retailers are cooperating with the manufacturers in this effort. Department stores, chains, and independent shoe stores throughout the country are stressing more and more the theme of "women's work shoes" and are carefully endeavoring to meet the needs of their customers. They are studying those needs to analyze the prevailing occupational conditions in their territory, and the footwear best suited for those occupations. They are getting advice from shoe manufacturers, from Government agencies, from consumer groups, and from employers. They are listening to the comments of their customers. They are learning a lot about the shoe needs of the working woman!

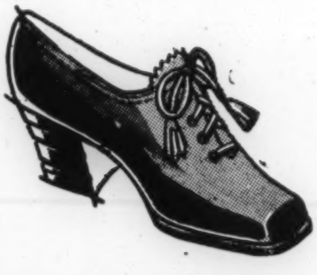
Many large employers of women are making work shoes available through their own company stores. Many others are displaying approved shoe styles prominently in their plants and are advising where the recommended footwear can be obtained. Many are cooperating closely with local dealers, recognizing that suitable work shoes increase the comfort, safety, and efficiency of their women employes and Government agencies are following the development of the women's work shoe very carefully.

Women designers who were first called in to consult with women themselves on what details they would suggest incorporating in factory uniforms know enough about the workings of the female mind to consider the difficulties of imposing standards of dress. Designers have learned that like their sisters and aunts in the home or in other fields, these plant workers bitterly resent being made into uniformed robots. But they are quick to adopt those types of safety clothing, headgear, and footwear when the necessity for them is presented in the right way; that is, as a suggestion for maintaining personal safety, comfort and appearance, and not as a factory ruling making them part of the herd.


A smart safety shoe for women workers, this model made by the Gale Shoe Mfg. Co., North Adams, Mass., is finding quick acceptance in a lot of war plants. It has a safety box toe and other features.

Types of feet are what the experts need to study next if they hope to prescribe the right kinds of work shoes. Most specialists in this field list all the factory hazards, and attempt to combine in one shoe, protection against all of them. This is simply impossible. There is no reason to produce such a safety shoe. But there is a reason for studying the shoes available in various styles and grades at the present time, in relation to the feet of workers and their specific shoe needs.




Two models by Dixon-Bartlett Co. which are designed for wear by WAVES, war service workers, and workers in occupations where no unusual foot hazards are present and where the type of work does not call for special work footwear.

Fatigue traced to common foot strain has been shown in reports from medical authorities to be a vital factor in the breakdown of efficiency of industrial workers. In several large plants where medical departments are staffed with specialists, the most recent staff additions are podiatrists who make careful checks on foot health of the workers. While this is not a general practice, it is a notable advance in modern protective medical procedure and a type of clinical work which might eventually influence the whole field of industrial foot health.

Cooperation of shoe manufacturer, shoe retailer, plant manager, and foot health advisor can build up a powerful force to protect the national foot health.

Such cooperation means that the podiatrist in charge of foot health in the plant clinic works with the plant management to encourage the wearing of the right types of footwear—*various* types, not just one standardized model for all operations. The podiatrist receives the benefit of the shoe retailer's knowledge of the shoe market in obtaining the correct types of shoes. These are procured in the plant or at the retailer's store, at a nominal mark-up, which provides for careful fitting service by the retailer's trained personnel. Shoes sold at cost by the plant are seldom fitted correctly since the uniform department cannot afford the services of a fitting expert.

One of the arguments against women's work clothes—and work shoes—was that women were more interested in style than in comfort and safety, even while on the job. This was disproved, as far as shoes are concerned, when HIDE AND LEATHER AND SHOES found that women placed style far below comfort, safety, and durability in outlining their work shoe wants.

At the same time, the style factor is important and should not be overlooked.

There is no reason why women's shoes for general work wear cannot be attractive and why they should not be smartly styled; there are very good reasons why they should be. If war conditions are used as an excuse for neglect of shoe styles or for uglification of footwear, then the shoe industry will have lost a great deal of the ground it has gained as a fashion industry. This would be unnecessary and unwise.

A new "high style" type of footwear is coming to the forefront in the women's shoe field—the long neglected and sorely needed women's work shoe. Evidence of increasing recognition of the importance of specially designed, well constructed, and suitably identified work shoes for women is found on every hand. Manufacturers are interested and some are producing work shoes; foot health authorities are seeing some of their dreams of foot health among women workers come true; stylists no longer give work shoe models a broad snub; retailers are selling available work shoes; employers are urging their workers to dress their feet properly, and in some instances are insisting that they do so; and as for working women—they are coming into their own for the first time in footwear history.

All of which is encouraging *but working women still constitute the most improperly shod group in America* when they are on the job, and women's work shoes still constitute the largest neglected type of footwear in the country. Much has been accomplished since HIDE AND LEATHER AND SHOES first smashed through the barriers of tradition and prejudice and asked why there is no distinction made between dress and work types in planning, making, and classifying women's shoes.

The development of suitable work footwear for all working women has only begun, but an excellent start has been made. Shoe designers, manufacturers, and distributors are working to provide the good work shoes which working women have long sought in vain. They are doing this now as a vital contribution to the war effort, and at the same time they are studying the potentialities of a post-war market for the classification of women's footwear which still does not exist but which heretofore had not even been considered essential. The millions of women who will carry on their share of the work that must be done in a post-war world will undoubtedly be better shod on the job than the millions who preceded them have ever been.

In the course of its thorough study of the need for women's work shoes, HIDE AND LEATHER AND SHOES has conclusively proved that a large potential market exists, that it is generally unserved, that it is receptive, and that cultivation of the market through the development and promotion of proper types of women's work shoes has the enthusiastic appreciation and support of influential consumer leaders, powerful consumer organizations, and Government war and home economics officials. Most important is the fact that *women who work want shoes for action.*

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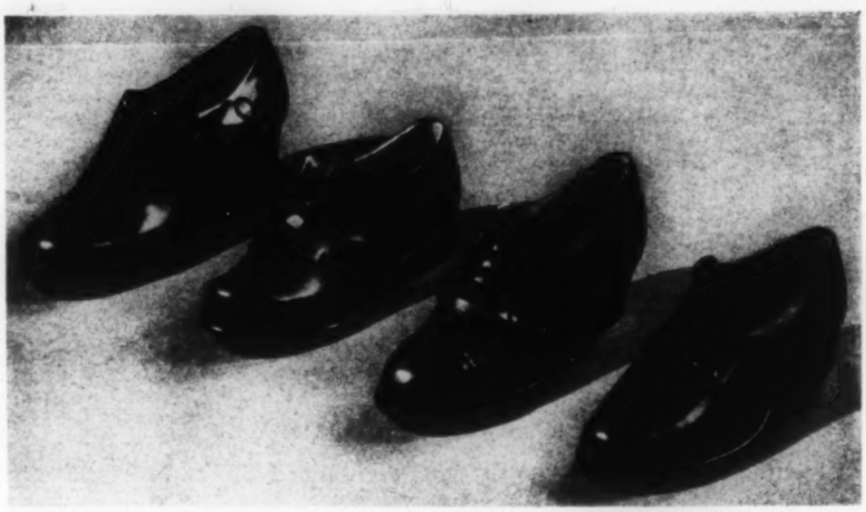


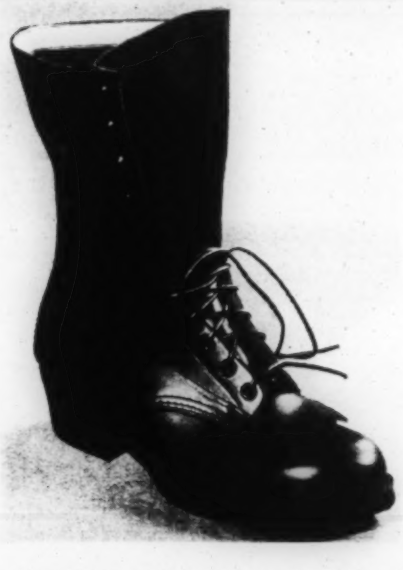
Women's five eyelet work oxford with non-metallic safety box toe, leather sole, and wood heel with rubber toplift, made by the James Shoe Mfg. Co., Milwaukee; five eyelet work oxford with elk uppers and leather sole and heel; Army russet oxford with steel box toe, leather sole, and leather heel with rubber toplift; official Girl Scout oxford with composition sole and rubber heel used extensively by women workers where special toe protection is not required. (Three shoes at right made by Brown Shoe Co., St. Louis.)

Women's Shoes for Action Are Available Now

THE forward strides which have been made by the shoe industry to provide suitable work shoes for women is indicated by the following list of manufacturers now making these shoes. In the early part of 1942, when HIDE AND LEATHER AND SHOES began to report the findings of its study of women's work shoes, few manufacturers were making any footwear specially designed and constructed for this purpose. Although some sport and walking oxfords, orthopedic shoes, and similar types were being made and purchased by women for work wear, there had been little effort to adapt these types to the special requirements of work wear and little promotion of the shoes for that purpose.

The following manufacturers are now making models which are offered as meeting the requirements of women workers in war industries, general factory work, agricultural work, restaurants, laundries, hospitals, and other fields. The information about types manufactured and retail price ranges (shown in parentheses) has been obtained directly from each manufacturer. Safety shoes conforming to the standards developed by the American Standards Assn. are so indicated in parentheses.

The footwear in the following lists includes only closed shoes with low to medium heels which are designed for comfort and durability under the conditions of work wear for which they are recommended by the manufacturer. No flimsy, open type, or strictly dress shoes are included.



Special boot for welders and shipyard workers, made by Gerlach's, San Francisco, Cal. So acute is the need for boots for these women workers that many are reported to be wearing men's boots because of inability to secure more suitable footwear . . .

For convenience, the following list is divided into major groups. They include *safety shoes, special work shoes, nurses' shoes, boots, moccasins, orthopedic and comfort shoes,* and *sport and walking oxfords.* Many of the standard shoes in the latter two classifications have been redesigned somewhat to adapt them for work wear.

Additional information about any of these work shoes and outlets through which they are distributed may be obtained directly from the manufacturer.

Safety Shoes

Brown Shoe Co., Inc., St. Louis, Mo. (ASA standards) ($6.00). ✓

Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).

Charles Cushman Co., Auburn, Me. (ASA standards) ($3.00-$4.00).

Fashion-Bilt Shoe Co., Inc., Pontiac, Ill. ($5.00).

Gale Shoe Mfg. Co., North Adams, Mass. (ASA standards) ($6.00-$7.00).

Hagerstown Shoe & Legging Co., Hagerstown, Md. (plastic box toes) ($4.00).

Hubbard Shoe Co., Inc., Rochester, N. H. (ASA standards) ($5.00).

International Shoe Co., St. Louis, Mo. (ASA standards).

James Shoe Mfg. Co., Milwaukee, Wis. (non-metallic safety box toe).

Joyce, Inc., Pasadena, Cal. (four-ply plastic box toe, corded composition outsole, platform type) ($6.95).

J. F. McElwain Co., Nashua, N. H. (ASA standards) ($4.45).

Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).

Muskin Shoe Co., Baltimore, Md. ($4.00).

Phyllis Shoe Co., Inc., Lowell, Mass. (plastic box toe) ($3.00).

Prime Shoe Co., Inc., Chelsea, Mass. ($3.00-$3.50).

Schawe-Gerwin Co., Cincinnati, O. ($5.00).

Simplex Shoe Mfg. Co., Milwaukee, Wis. ($6.95-$7.50).

Spalsbury-Steis-Deevers Shoe Co., St. Louis, Mo. (plastic safety box toe) ($6.00).

Special Work Shoes

Air-Tred Shoe Corp., Auburn, Me.

D. Armstrong & Co., Rochester, N. Y. ($12.50 up).

Brown Shoe Co., Inc., St. Louis, Mo.

Curtis-Stephens-Embry Co., Reading, Pa.

Gale Shoe Mfg. Co., North Adams, Mass. ($5.00-$6.00).

Gerlach's, San Francisco, Cal. (welders' boots) ($13.85).

Johansen Bros. Shoe Co., Inc., St. Louis, Mo. ($7.95 up).

Prime Shoe Co., Inc., Chelsea, Mass. (agricultural) ($3.00-$3.50).

Rope-Soles, Inc., New York, N. Y. (rope soled shoes) ($5.00-$5.50).

Sam Smith Shoe Corp., Newmarket, N. H. (semi-safety) ($5.00).

Spalsbury-Steis-Deevers Shoe Co., St. Louis, Mo. (plastic soled oxfords, protective toe oxfords).

F. J. Stahmer Shoe Co., Davenport, Ia. (wood soled work shoes) ($2:50-$3.50).

Nurses'

Air Tred Shoe Corp., Auburn, Me. ($6.00-$6.95).

Alberts Shoe Co., Middleboro, Mass. ($3.00-$5.00).

Allied Shoe Co., Elgin, Ill. ($5.50-$6.50).

Altman Bros. Shoe Mfg. Co., Cincinnati, O. ($5.50-$6.00).

Antioch Shoe Project, Inc., Portsmouth, O. (shoes developed by Antioch College) ($6.95-$11.50).

D. Armstrong & Co., Rochester, N. Y.

Brown Shoe Co., Inc., St. Louis, Mo.

Cannon Shoe Co., Baltimore, Md. ($2.99).

Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).

Curtis-Stephens-Embry Co., Reading, Pa.

Charles Cushman Co., Auburn, Me. ($3.00).

Walker T. Dickerson Co., Columbus, O. ($9.50-$11.50).

Dodson-Fisher Co., Minneapolis, Minn. ($4.00-$5.00).

Irving Drew Corp., Lancaster, O. ($7.95; $8.95).

Fashion-Bilt Shoe Co., Inc., Pontiac, Ill. ($5.00).

Florsheim Shoe Co., Chicago, Ill. ($10.95).

Fikany Shoe Corp., Rochester, N. Y. ($12.95).

A. J. Foster Shoe Co., Lowell, Mass.

Gale Shoe Mfg. Co., North Adams, Mass. ($5.00-$6.00).

Gerlach's, San Francisco, Cal. ($8.50-$10.50).

Gilbert Shoe Co., Thiensville, Wis. ($7.00-$7.50).

Left to right: Two protective toe shoes for factory workers with plastic box toes, elk uppers, leather soles, and 8/8 and 12/8 heels; two-tone pigskin moccasin oxford with plastic sole and 6/8 rubber heel. (Made by Spalsbury-Steis-Deevers Shoe Co., St. Louis, and sold through the Vocational Footwear Co., St. Louis.) Wood soled work shoe with unlined side leather upper made by F. J. Stahmer Shoe Co., Davenport, Ia.

H. C. Godman Co., Columbus, O. ($3.00-$4.50).

Grossman's Shoes, Inc., Brooklyn, N. Y.

Grossman Shoe Co., Inc., Parkersburg, W. Va. ($4.00-$5.00).

Hagerstown Shoe & Legging Co., Hagerstown, Md. ($2.49; $2.98; $3.45).

Holmes, Stickney & Walker, Inc., Portland, Me. ($5.00-$6.00).

Hubbard Shoe Co., Inc., Rochester, N. H.

Huiskamp Bros. & Co., Keokuk, Ia.

Huth & James Shoe Co., Milwaukee, Wis. ($5.00-$6.00).

International Shoe Co., St. Louis, Mo.

R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).

Irving Shoe Co., Chicago, Ill.

Johansen Bros. Shoe Co., Inc., St. Louis, Mo. ($7.95-$8.95).

Juvenile Shoe Corp. of America, St. Louis, Mo. ($5.95-$6.95).

Left to right: McKay welt safety shoe with side leather upper, composition sole and steel box toe, made according to ASA standards by Charles Cushman Co., Auburn, Me.; Safety toe blucher oxford with corded sole made in black or brown kipskin by Craddock-Terry Shoe Corp., Lynchburg, Va.; "Service Softie," a soft, flexible, sturdy shoe for general work wear, with elk leather upper and leather sole, made by Johansen Bros. Shoe Co., Inc., St. Louis.

G. R. Kinney Co., Carlisle, Pa. ($2.29; $2.98).

Kopman Woracek Shoe Mfg. Co., Flat River, Mo. ($3.00-$4.00).

Chris Laganas Shoe Co., Lowell, Mass. ($3.95).

E. C. Livingston, Inc., New Oxford, Pa. ($5.00-$6.50).

Lumbard-Watson Co., Auburn, Me. ($4.00-$5.00).

Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00).

Miller Shoe Co., Cincinnati, O. ($8.00-$10.50).

P. W. Minor & Son, Inc., Batavia, N. Y. ($9.50-$10.00).

National Shoe & Leather Co., Epping, N. H. ($2.50-$3.00).

O'Donnell Shoe Co., Humboldt, Tenn. ($6.95-$10.00).

Olympic Shoe Co., Lynn, Mass. ($4.00-$6.00).

Owens Shoe Co., Salem, Mass. ($4.00-$5.00).

Howard S. Rue & Sons, Inc., Philadelphia, Pa. ($3.00).

Selby Shoe Co., Portsmouth, O. ($6.95-$10.95).

Simplex Shoe Mfg. Co., Milwaukee, Wis. ($5.75-$6.95).

G. Edwin Smith Shoe Co., Columbus, O.

Sam Smith Shoe Corp., Newmarket, N. H. ($5.00).

Somerset Shoe Co., Skowhegan, Me.

Spalsbury-Steis-Deevers Shoe Co., St. Louis, Mo. ($5.50).

P. Sullivan Shoe Co., Cincinnati, O. ($4.00-$5.00).

Sun Shoe Mfg. Co., Chicago, Ill. ($2.00-$3.00).

Weyenberg Shoe Mfg. Co. (Hubbard Shoe Co. branch), Milwaukee, Wis. ($5.00).

Boots

Bray, Stanley & Ellis, Inc., Boston, Mass. (warm boots for outdoor wear) ($1.90; $2.90).

A. J. Foster Shoe Co., Lowell, Mass. (old ladies' bals) ($1.98 up).

Gerlach's, San Francisco, Cal. ($13.85).

Hubbard Shoe Co., Inc., Rochester, N. H.

International Shoe Co., St. Louis, Mo.

R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).

J. Mackey & Son, Jersey City, N. J. ($6.00 up).

O'Donnell Shoe Co., Humboldt, Tenn. (jodhpurs) ($9.50-$12.50).

Spalsbury-Steis-Deevers Shoe Co., St. Louis, Mo. (welders') ($6.00).

Sun Shoe Mfg. Co., Chicago, Ill. ($4.00; $5.00; $6.00).

Moccasins

Batá Shoe Co., Inc., Belcamp, Md. ($2.29).

Bows Moccasin Shoe Co., Avon, Mass. ($5.50).

Brown Shoe Co., Inc., St. Louis, Mo.

Co-Ed Shoe Mfg. Co., Wakefield, Mass.

Curtis-Stephens-Embry Co., Reading, Pa. ($5.00-$5.50).

Daley Moccasin Co., Fort Covington, N. Y. ($3.00-$6.00).

Gale Shoe Mfg. Co., North Adams, Mass. ($5.00-$6.00).

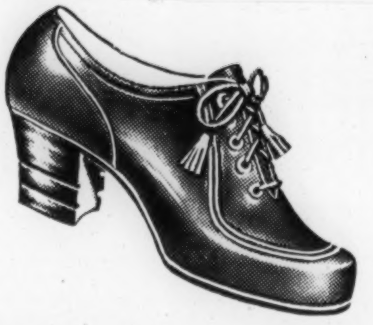
H. C. Godman Co., Columbus, O. ($4.00-$4.50).

Hagerstown Shoe & Legging Co., Hagerstown, Md. ($2.49; $2.98; $3.49; $4.00).

Hubbard Shoe Co., Inc., Rochester, N. H. ($3.45).

International Shoe Co., St. Louis, Mo.

Juvenile Shoe Corp. of America, St. Louis, Mo. ($5.50-$6.95).



This streamlined oxford by Dixon-Bartlett Co. is a popular model with the WAVES, who buy their own shoes at regular retail stores, and also with some women workers who want a smart shoe combining comfort and style features.

G. R. Kinney Co., Carlisle, Pa. ($2.29; $2.98; $3.35).

A. S. Kreider Shoe Co, Annville, Pa. ($3.00-$5.00).

E. C. Livingston, Inc., New Oxford, Pa. ($5.00-$6.50).

Muskin Shoe Co., Baltimore, Md. ($3.00-$4.00).

Phyllis Shoe Co., Lowell, Mass. ($3.00).

Prime Shoe Co., Inc., Chelsea, Mass. ($3.00).

Reider Shoe Mfg. Co., Schuylkill Haven, Pa. ($5.50-$6.50).

Small Abbott Co., Inc., Freeport, Me. ($3.00-$5.00).

Tru-Stitch Moccasin Co., Malone, N. Y. ($3.98-$5.50).

Viner Bros., Bangor, Me. ($1.95-$12.95).

Orthopedic and Comfort

Air-Kushin Shoes, Inc., Cincinnati, O. ($4.00-$5.00).

Air Tred Shoe Corp., Auburn, Me. ($6.00-$6.95).

Altman Bros. Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).

Antioch Shoe Project, Inc., Portsmouth, O. (shoes developed by Antioch College) ($6.95-$11.50).

D. Armstrong & Co., Rochester, N. Y. ($12.50 up).

Brown Shoe Co., Inc., St. Louis, Mo. ($4.00-$6.95; $8.00).

W. B. Coon Co., Rochester, N. Y. ($8.95-$12.95).

Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).

Walker T. Dickerson Co., Columbus, O. (corrective shoes) ($9.50-$11.50).

Irving Drew Corp., Lancaster, O. ($7.95-$8.95).

Fashion-Bilt Shoe Co., Inc., Pontiac, Ill. ($5.00).

Fikany Shoe Corp., Rochester, N. Y. ($12.95).

Florsheim Shoe Co., Chicago, Ill. ($10.95).

Gerlach's San Francisco, Cal. ($10.85-$15.00).

H. C. Godman Co., Columbus, O. ($3.00-$4.00).

Fine finishes in approved shades for all military and civilian purposes.

Fine leather finishes for over 60 years

K. J. QUINN & CO., Inc.

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HOWES BROS. CO.

SOLE LEATHER AT ITS BEST

Howes

TANNERS CUT SOLE CO

Grossman Shoes, Inc., Brooklyn, N. Y.

Grossman Shoe Co., Inc., Parkersburg, W. Va. ($4.00-$5.00).

J. J. Grover Shoe Co., Boston, Mass. (hand turned only) ($5.00-$8.95).

Holmes, Stickney & Walker, Inc., Portland, Me. ($5.00-$6.00).

Huiskamp Bros. & Co., Keokuk, Ia. ($5.00-$7.00).

International Shoe Co., St. Louis, Mo.

R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).

Irving Shoe Co., Chicago, Ill. ($6.00).

G. R. Kinney Co., Carlisle, Pa. ($2.98; $3.98; $4.98).

Krippendorf Dittmann Co., Cincinnati, O. ($6.95-$7.95).

Chris Laganas Shoe Co., Lowell, Mass. ($3.95).

E. C. Livingston, Inc., New Oxford, Pa. ($5.00-$6.50).

L. V. Marks & Sons Co., Cincinnati, O. ($4.00-$5.00).

Marshall, Meadows & Stewart, Inc., Auburn, N. Y. ($8.95 up).

Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00).

Miller Shoe Co., Cincinnati, O. ($8.50-$12.50).

P. W. Minor & Son, Inc., Batavia, N. Y. ($7.95-$9.50).

National Shoe & Leather Co., Inc., Epping, N. H. ($2.50-$3.00).

O'Donnell Shoe Co., Humboldt, Tenn. ($4.50-$10.00).

Olympic Shoe Co., Lynn ($4.00-$6.00).

E. P. Reed & Co., Rochester, N. Y. ($9.95-$10.95).

Roth, Rauh & Heckel, Inc., Ripley, O. ($4.50-$5.00).

Howard S. Rue & Sons, Inc., Philadelphia, Pa. ($3.00).

Selby Shoe Co., Portsmouth, O. ($6.95-$12.95).

Simplex Shoe Mfg. Co., Milwaukee, Wis. ($5.50-$7.50).

G. Edwin Smith Shoe Co., Columbus, O.

Somerset Shoe Co., Skowhegan, Me.

P. Sullivan Shoe Co., Cincinnati, O. ($4.00-$5.00).

Tweedie Footwear Corp., Jefferson City, Mo. ($7.95).

Viko Shoe Co., Worcester, Mass. ($2.50-$4.00).

Sport and Walking Oxfords

Air-Kushin Shoes, Inc., Cincinnati, O. ($4.00-$5.00).

Air Tred Shoe Corp., Auburn, Me. ($6.00-$6.95).

Alberts Shoe Co., Middleboro, Mass. ($3.00-$5.00).

Allied Shoe Co., Elgin, Ill. ($5.50-$6.50).

Altman Bros. Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).

Antioch Shoe Project, Inc., Portsmouth, O. (shoes developed by Antioch College) ($6.95-$11.50).

D. Armstrong & Co., Rochester, N. Y. ($12.50 up).

Avon Shoe Co., Inc., Jersey City, N. J.

Bat'a Shoe Co., Inc., Belcamp, Md. ($2.29).

L. E. Beaudin Shoe Co., Hanover, Pa. ($2.98-$3.98).

Boyd-Welsh, Inc., St. Louis, Mo. ($9.95; $10.95; $11.95).

Brown Shoe Co., Inc., St. Louis, Mo. ($3.00-$6.00; $6.95).

Safety shoe for women war workers with safety box toe and leather sole, made according to ASA standard specifications by the Hubbard Shoe Co., Inc.

California Shoes, Ltd., Los Angeles, Cal. ($5.50-$8.95).

Cannon Shoe Co., Baltimore, Md. ($2.99).

Carlisle Shoe Co., Carlisle, Pa. ($8.95-$10.95).

Clover Shoe Mfg. Co., Inc., Burlington, N. J. ($6.95-$7.95).

Co-Ed Shoe Mfg. Co., Wakefield, Mass. ($3.00).

Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).

Curtis-Stephens-Embry Co., Reading, Pa. ($5.50).

Crik-Etts, Inc., New York City ($8.95-$9.95).

Charles Cushman Co., Auburn, Me. ($2.50-$3.50).

Walker T. Dickerson Co., Columbus, O. ($9.50-$10.50).

Dixon-Bartlett Co., Baltimore, Md. ($8.95-$10.95).

Dodson-Fisher Co., Minneapolis, Minn. ($4.00-$5.00).

Irving Drew Corp., Lancaster, O. ($7.95-$8.95).

Edmar Footwear Co., Putnam, Conn. ($3.00).

Fashion-Bilt Shoe Co., Inc., Pontiac, Ill. ($5.00).

Florsheim Shoe Co. ($10.95-$12.95)

A. J. Foster Shoe Co., Lowell, Mass. ($1.98 up).

Freeport Shoe Co., Freeport, Me. ($2.50-$3.00).

Gale Shoe Mfg. Co., North Adams, Mass. ($5.00-$6.00).

Gardiner Shoe Co., Gardiner, Me. ($4.00).

General Shoe Corp., Nashville, Tenn. ($4.00-$5.50).

Gerlach's, San Francisco, Cal. ($8.50).

Gilbert Shoe Co., Thiensville, Wis. ($7.00-$7.50).

H. C. Godman Co., Columbus, O. ($4.00-$4.50).

Grossman's Shoes, Inc., Brooklyn, N. Y.

Hagerstown Shoe & Legging Co., Hagerstown, Md. ($2.49; $2.98; $3.49; $4.00).

Holly Shoe Co., Littleton, N. H. ($3.00).

Holmes, Stickney & Walker, Inc., Portland, Me. ($5.00-$6.00).

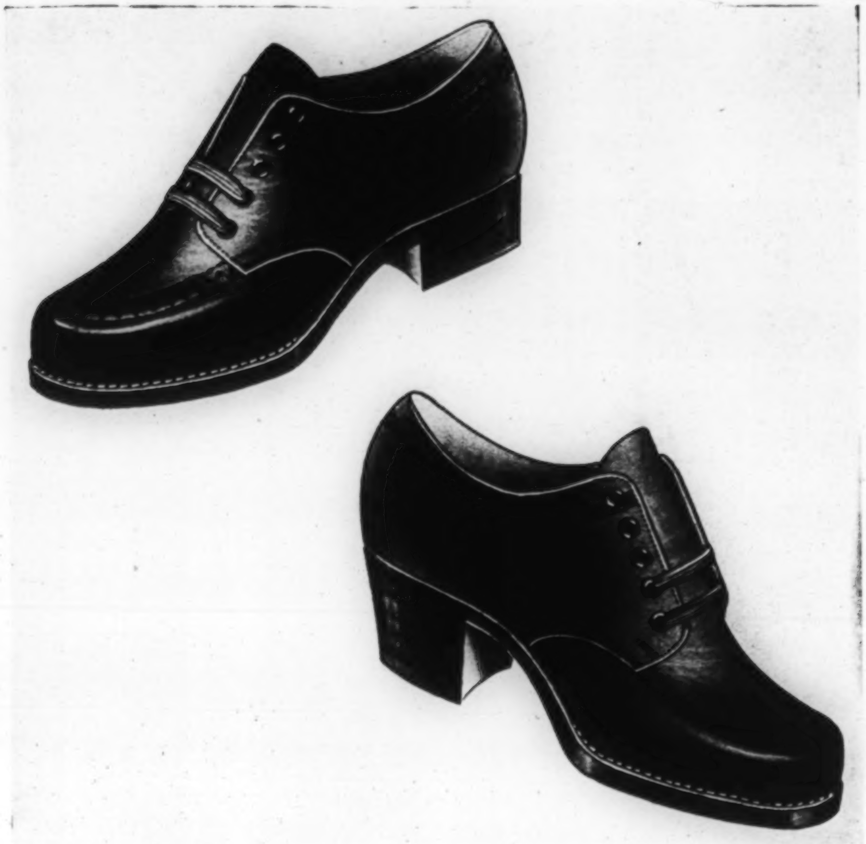
sheepskins
for
military
and
civilian
requirements

COLORS • CALFINE • HAT SWEAT • WHITES

BETTER
SHEEPSKINS
FOR BETTER
SHOES

BESSE
OSBORN &
ODELL, INC.

[illegible] South St., Boston, Mass.



Two attractive sport models made by the General Shoe Corp., Nashville, Tenn., have won favor for work wear by women whose occupations do not require special safety features. These shoes do not have safety box toes, but they are comfortable, attractive, and durable; made with seamless vamps for greater comfort; with five eyelet uppers for good support; and with two heel heights most suitable for general work wear. . . .

Hubbard Shoe Co., Inc., Rochester, N. H. ($3.45).

Huiskamp Bros. & Co., Keokuk, Ia. ($5.00-$6.50).

Huth & James Shoe Co., Milwaukee, Wis. ($4.00; $5.00; $6.00).

International Shoe Co., St. Louis, Mo.

R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).

Irving Shoe Co., Chicago, Ill. ($6.00).

James Shoe Mfg. Co., Milwaukee, Wis. ($6.95).

Johansen Bros. Shoe Co., Inc., St. Louis, Mo. ($7.95-$8.95).

Joyce, Inc., Pasadena, Cal. ($6.50).

Juvenile Shoe Corp. of America, St. Louis, Mo. ($5.50-$6.95).

Kane, Dunham & Kraus, Inc., St. Louis, Mo. ($6.00-$6.75).

G. R. Kinney Co., Carlisle, Pa. ($2.29; $2.98; $3.30; $3.35).

Kopman Woracek Shoe Mfg. Co., Flat River, Mo. ($3.00-$4.00).

A. S. Kreider Shoe Co., Annville, Pa. ($3.00-$5.00).

Krippendorf-Dittman Co., Cincinnati, O. ($6.95-$7.95).

Chris Laganas Shoe Co., Lowell, Mass. ($3.95).

Laird Schober & Co., Inc., Haverhill, Mass. ($8.95-$10.50).

E. C. Livingston, Inc., New Oxford, Pa. ($5.00-$6.50).

J. Mackey & Son, Jersey City, N. J. ($5.00 up).

Marshall, Meadows & Stewart, Inc., Auburn, N. Y. ($8.95 up).

Medway Shoe Mfg. Corp., Medway, Mass. ($1.75; $2.00).

Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00).

Milius Shoe Co., St. Louis, Mo. ($5.00-$7.50).

P. W. Minor & Son, Inc., Batavia, N. Y. ($7.50-$7.95).

Muskin Shoe Co., Baltimore, Md. ($3.00-$4.00).

Narjos, Inc., Boston, Mass. ($4.00).

Norrwock Shoe Co., Norridgewock, Me. ($3.30-$3.45).

Owens Shoe Co., Salem, Mass. ($4.00-$5.00).

Paramount Shoe Mfg. Co., St. Louis, Mo. ($6.95-$7.95).

Parlante Shoes, Inc., New York City ($15.50-$18.50).

Phyllis Shoe Co., Inc., Lowell, Mass. ($3.00).

Prime Shoe Co., Inc., Chelsea, Mass. ($3.00).

Ramsey Shoe Co., New York City ($1.98).

E. P. Reed & Co., Rochester, N. Y. ($8.95-$10.95).

Reider Shoe Mfg. Co., Schuylkill Haven, Pa. ($5.50-$6.50).

Roth, Rauh & Heckel, Inc., Ripley, O. ($4.50-$5.50).

Schawe-Gerwin Co., Cincinnati, O. ($5.00).

Selby Shoe Co., Portsmouth, O. ($6.95-$12.95).

Simplex Shoe Mfg. Co., Milwaukee, Wis. ($5.50-$7.50).

G. Edwin Smith Shoe Co., Columbus, O. ($4.95-$6.00).

J. P. Smith Shoe Co., Chicago, Ill. ($10.95-$12.95).

Sam Smith Shoe Corp., Newmarket, N. H. ($5.00).

Spalsbury-Steis-Deevers Shoe Co., St. Louis ($5.50-$6.00).

Stein-Sulkis Shoe Co., Haverhill, Mass. ($5.00-$6.00).

Stetson Shoe Co., Inc., South Weymouth, Mass. ($10.95-$12.95).

Sun Shoe Mfg. Co., Chicago, Ill. ($2.00-$3.00).

Tweedie Footwear Corp., Jefferson City, Mo. ($7.95).

Weyenberg Shoe Mfg. Co. (Hubbard Shoe Co. branch), Milwaukee, Wis. ($4.00-$6.50).

Williams Mfg. Co., Portsmouth, O. ($2.98).

Willits Shoe Co., Halifax, Pa. ($5.00-$6.00).

In 1940 only four factories in the United States were listed as making women's work shoes. Actually, there were in addition 10 or more small shoe manufacturers making specialized farm shoes, pegged shoes, and heavy duty shoes for women usually sold through catalog houses and chain stores. By early 1943 there were eight manufacturers ready to produce the new WPB specified steel toe safety shoes for women, 12 factories making special safety types with other protective devices other than steel toe boxes, and over 100 women's shoe manufacturers where the specialty of the house had been detailed in a simplified version and designated as a "work shoe."

IM HERE FOR THE DURATION AND POST-WAR PERIOD
47
46
1945
1944
1943
LADIES WORK SHOE
1942

NELLY DON
ACTION CLOTHES DONALLS FOR AMERICAN WOMEN

NELLY DON GIVES YOU

Designed **BY** *Women!* **ON** *Women!*

It takes the right tools, from start to finish, to do a right job. Nelly Don "Action Clothes" are part of the tools for your job, help your production because of these three reasons . . . They are scientifically cut for greater efficiency . . . Attractively designed for increased worker morale . . . Sturdily made for long wearability.

Fashioned to

SMARTER APPEARANCE . . . GREATER

KEY SHEET

Fabrics and Colors Used in Nelly Don Action Clothes

DYED COTTON SHEETING
- Blue

UNBLEACHED COTTON SHEETING
- Natural

HERRINGBONE COTTON TWILL
- White
- Olive Drab

VAT DYE COTTON DENIM
- Blue

COTTON JEAN CLOTH
- Defense Blue
- Tan

MIAMI COTTON SUITING (Denim)
- Medium Blue
- Faded Blue

BILTMORE COTTON TWILL
- Blue
- Green
- Tan

MEDIUM WEIGHT COTTON POPLIN
- Green
- Blue
- Tan

SLUB COTTON POPLIN
- Blue
- Tan

SLUB COTTON BROADCLOTH
- White

RAYON SHANTUNG
- White

WINGER CLOTH (Rayon, Teca and Acetate)
- Victory Blue

RAYON GABARDINE
- Navy

TWO-TONE RAYON GABARDINE
- Defense Blue
- Beige

TWO-TONE COVERT (Rayon and Acetate)
- Tan
- Defense Blue

COMMANDO TWILL (Rayon and Acetate)
- Navy
- Gallant Blue
- Pilot Blue
- Medium Green

TROOPER CLOTH (Rayon, Cotton and Wool)
- Defense Blue

Range of Sizes

Nelly Don industrial-garment sizes range from 12 to 20. If, however, your specifications call for either smaller or larger regular sizes, we will be glad to discuss them with you.

Address All Inquiries to

DONNELLY GARMENT SALES COMPANY
DEPARTMENT D
1828 WALNUT
KANSAS CITY, MISSOURI

FEMININE ACTION CLOTHES

FOR *Women on the Job!*

★ COMFORTABLE DESIGNS ELIMINATE GARMENT FATIGUE

Scientific designing, the culmination of extensive research, makes it possible for Nelly Don to bring you *comfortable* work clothes—easy for *women* to work in. Specially cut sleeves, non-binding shoulders, easily accessible pockets and true sizing are a few examples. These design advantages will pay production dividends—for you *and* your employees!

★ STURDY FABRICS, REINFORCED SEAMS FOR EXTRA WEAR

That's the reason Nelly Don's high quality is your long-run economy! Fabrics in all of her industrial garments are chosen for their tested strength and durability. Seams are pinked, bound, or double stitched to wear *longer* . . . buttons are composition, non-sparking. All these factors mean but one thing—long-term, low cost—a minimum of replacements!

★ EASY UPKEEP

Problems of upkeep have been thoroughly studied by Nelly Don designers . . . all cotton fabrics are Sanforized and have passed careful and exacting washability tests. Many fabrics (like gabardine) have been Tebilized to resist wrinkling.

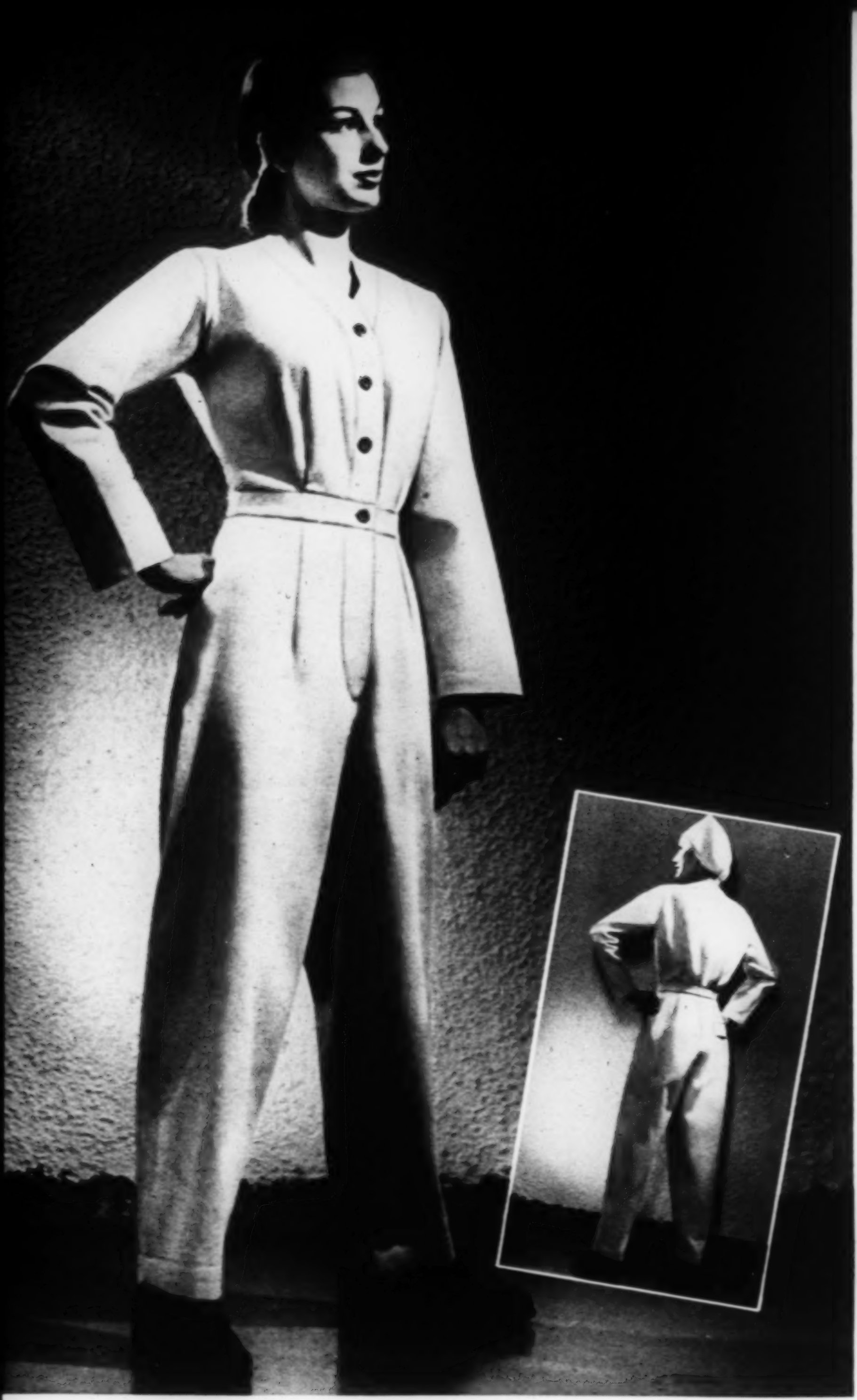
★ FLATTERING STYLES HEIGHTEN WORKER MORALE

England's war plants have given us final proof of the vital part *fashion* plays in women's morale. We know that a well-dressed worker, consciously satisfied with her appearance, will be most *efficient*. Women who enjoy the fit, color, and styling of the garment they are wearing can give all of their attention to their work! Nelly Don has given this fact her full consideration—how well she succeeded is obvious when you see the garments on. They are designed *by* women . . . *on* women . . . *for* women!

DONNELLY GARMENT SALES COMPANY . . . KANSAS CITY, MISSOURI

Fit the Feminine Figure!

FREEDOM . . . INCREASED SAFETY



LEFT—STYLE 3500

Sanforized Safety Donall Recommended for Powder Plants

- ★ One-piece garment with stitched-down darts eliminates possibility of catching powder.
- ★ Contrast buttons (non-sparking) unfasten to waist, with fly-front closing below waist . . . easy to slip on and off.
- ★ Tapering sleeves and trousers.
- ★ One-strap, open safety pocket on back of trousers.
- ★ Contrast stitching trim matches buttons, gives interest to the design.

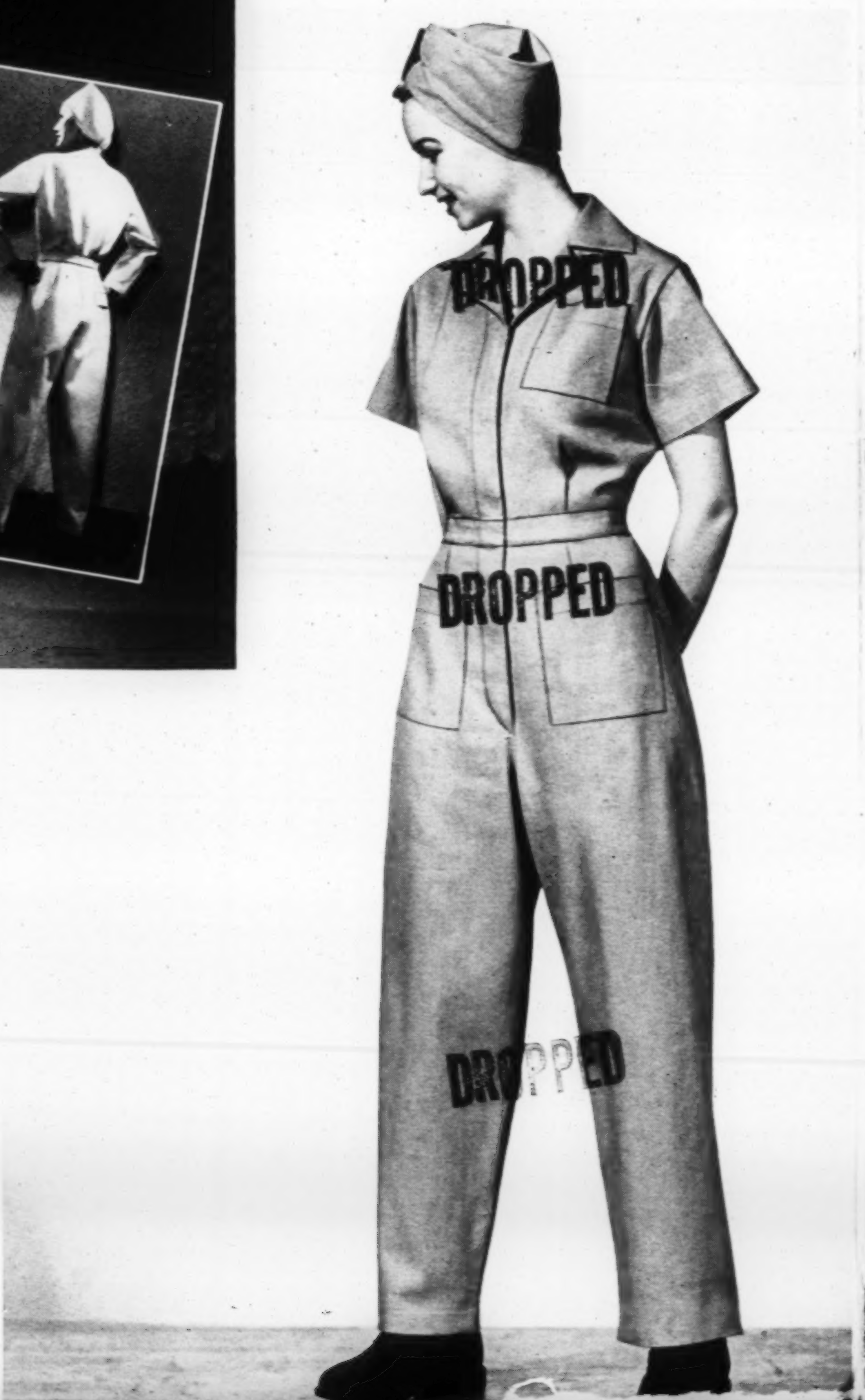
3500—**Dyed Cotton Sheeting.**
White Herringbone Cotton Twill.
Vat Dye Cotton Denim.
Olive Drab Herringbone Cotton Twill.
Unbleached Cotton Sheeting.
Miami Cotton Suiting (Denim).
Cotton Jean Cloth.
★ 3350—**Draw string Powder Cap to match.**

RIGHT—STYLE 3550

Sanforized Donall with Patch Pockets

- ★ Fly-front closing prevents buttons from scratching, looks trim.
- ★ Three patch pockets, conveniently placed.
- ★ Free-reaching short sleeves.
- ★ Hem in trousers for easy length adjustment.
- ★ One-piece design, well-fitting, uncluttered, easy to work in.

3550—**Dyed Cotton Sheeting.**
Unbleached Cotton Sheeting.
White Herringbone Cotton Twill.
Vat Dye Cotton Denim.
Olive Drab Herringbone Cotton Twill.
Miami Cotton Suiting (Denim).
Cotton Jean Cloth.
★ 3340—**Adjustable Button Cap to Match.**



RIGHT—STYLE 3680

Jumper Donall to Wear With Blouses . . . Sanforized

★ One-piece jumper Donall to be worn with blouses.

★ Straps, cut wide for comfort, button at front shoulder line.

★ Self belt held in place by "keepers."

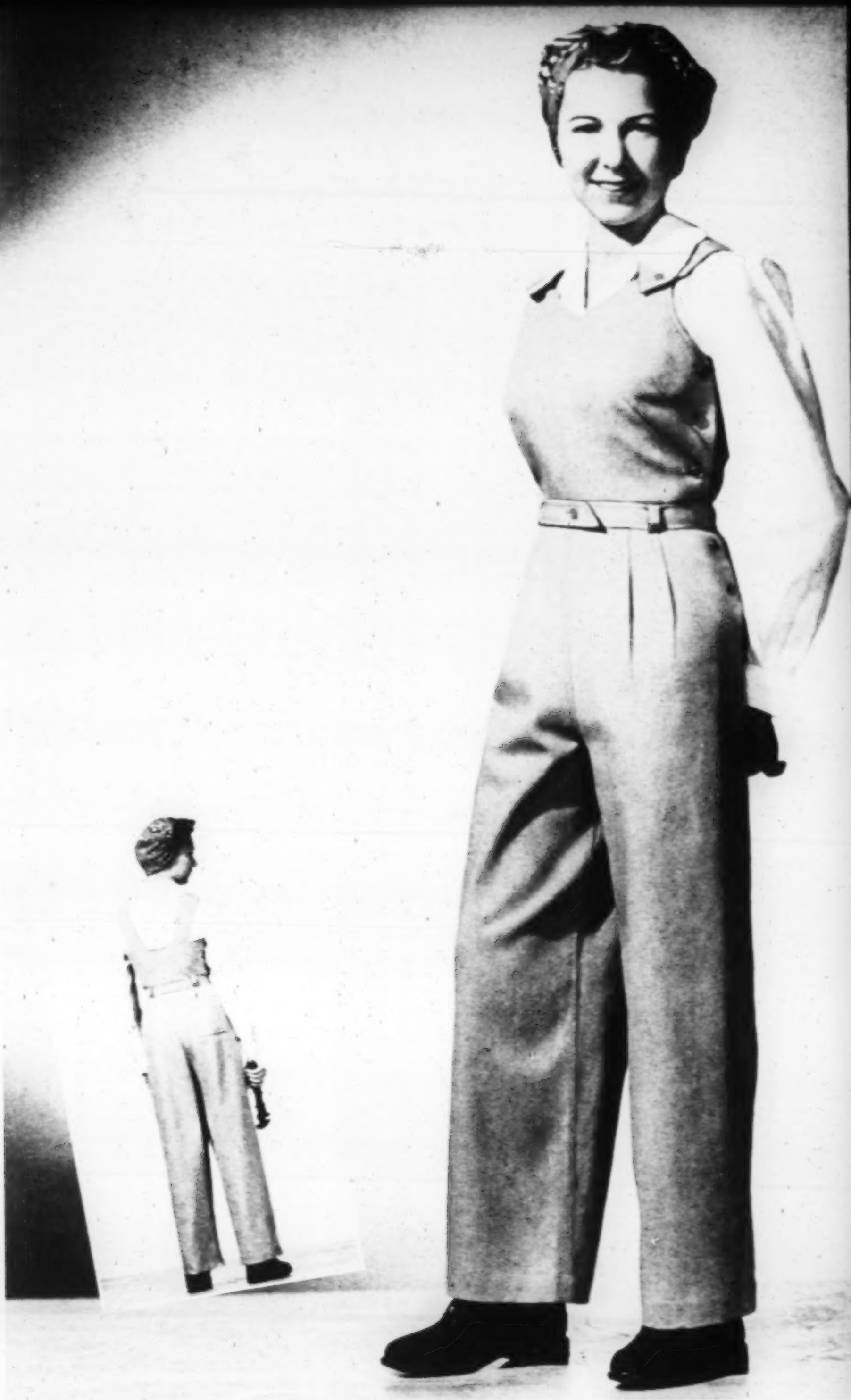
★ Utility pocket on back trousers.

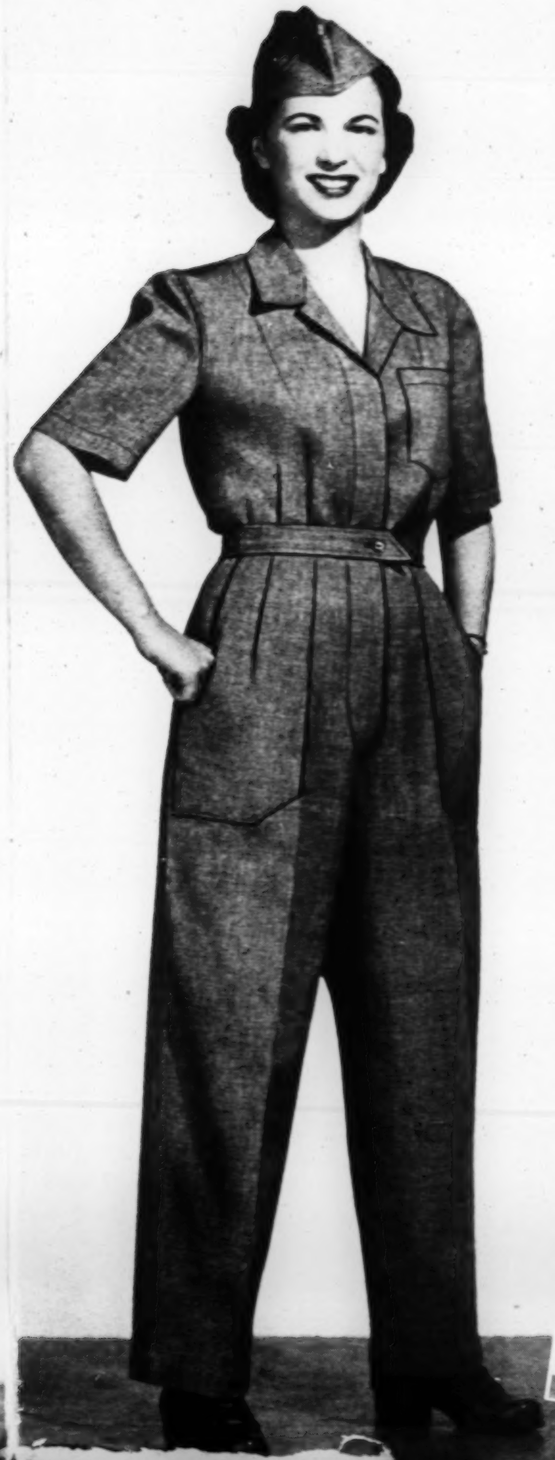
★ Fitted bodice line is becoming to feminine figures.

3680—Dyed Cotton Sheeting.
Unbleached Cotton Sheeting.
White Herringbone Cotton Twill.
Vat Dye Cotton Denim.
Olive Drab Herringbone Cotton Twill.
Miami Cotton Suiting Denim .
Cotton Jean Cloth.

★ Tailored washable shirt in rayon shantung or Sanforized white slub cotton broadcloth.

★ 3345—Triangle Head Scarf.





LEFT—STYLE 3580

One-Piece Donall Cut for Action and Comfort . . . Sanforized

★ Short, free-movement sleeves.

★ Two elongated pockets on trousers . . . and a conveniently placed bodice pocket.

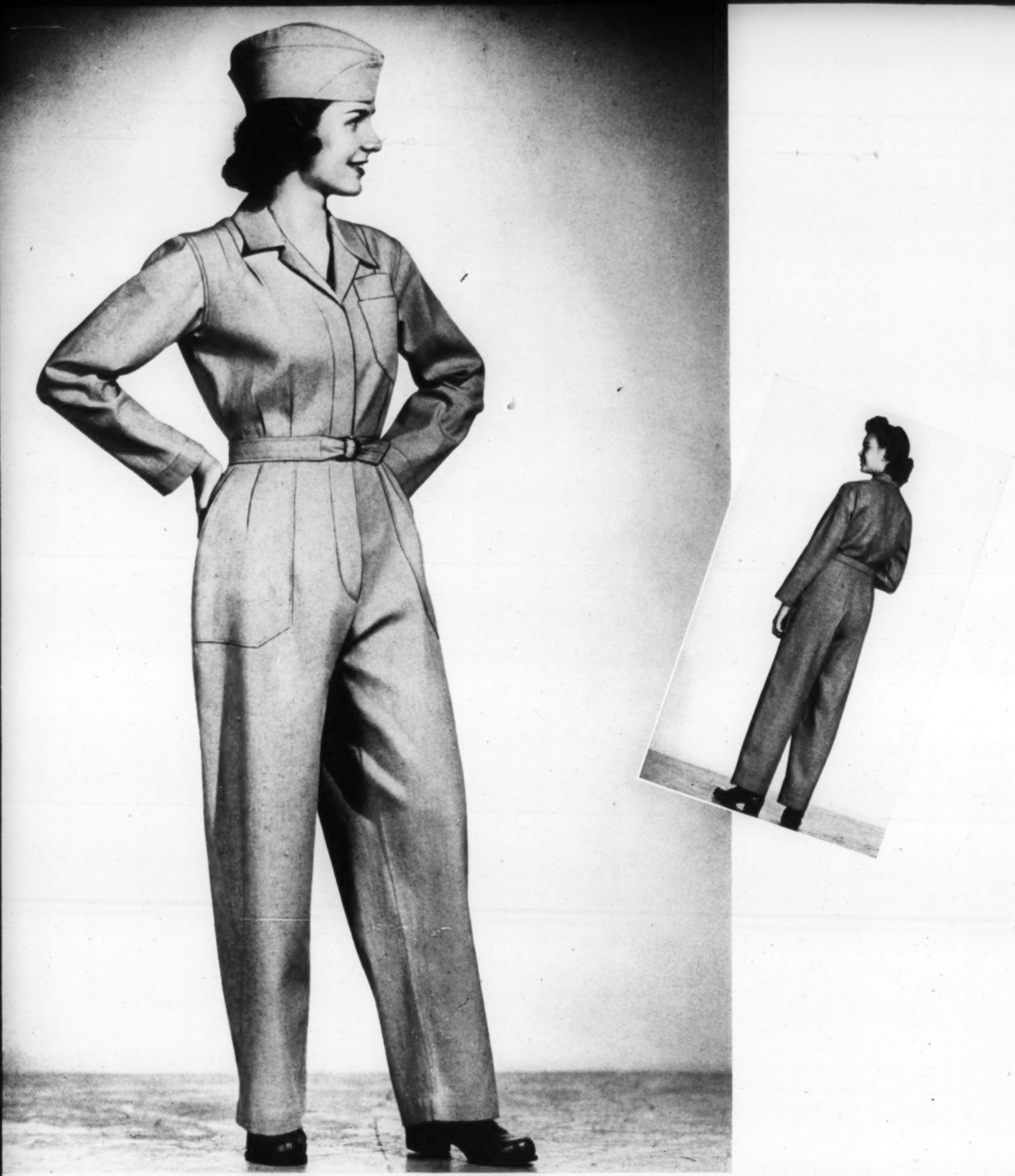
★ Drop seat closing concealed by pockets, and by self belt attached to back waistline.

★ Darts in back bodice release a comfortable fullness across shoulders and back.

★ Fly-front closing.

3580—Dyed Cotton Sheeting.
Unbleached Cotton Sheeting.
White Herringbone Cotton Twill.
Vat Dye Cotton Denim.
Olive Drab Herringbone Cotton Twill.
Miami Cotton Suiting Denim .
Cotton Jean Cloth.

★ Overseas Cap to match.



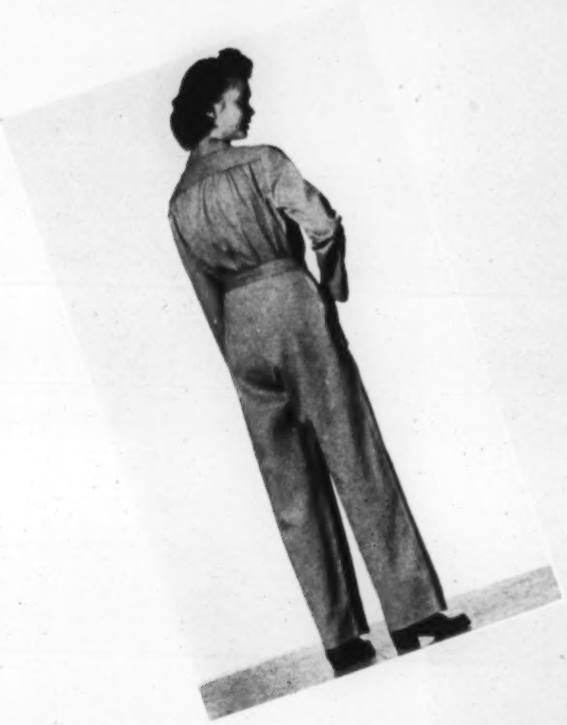
ABOVE—STYLE 3570

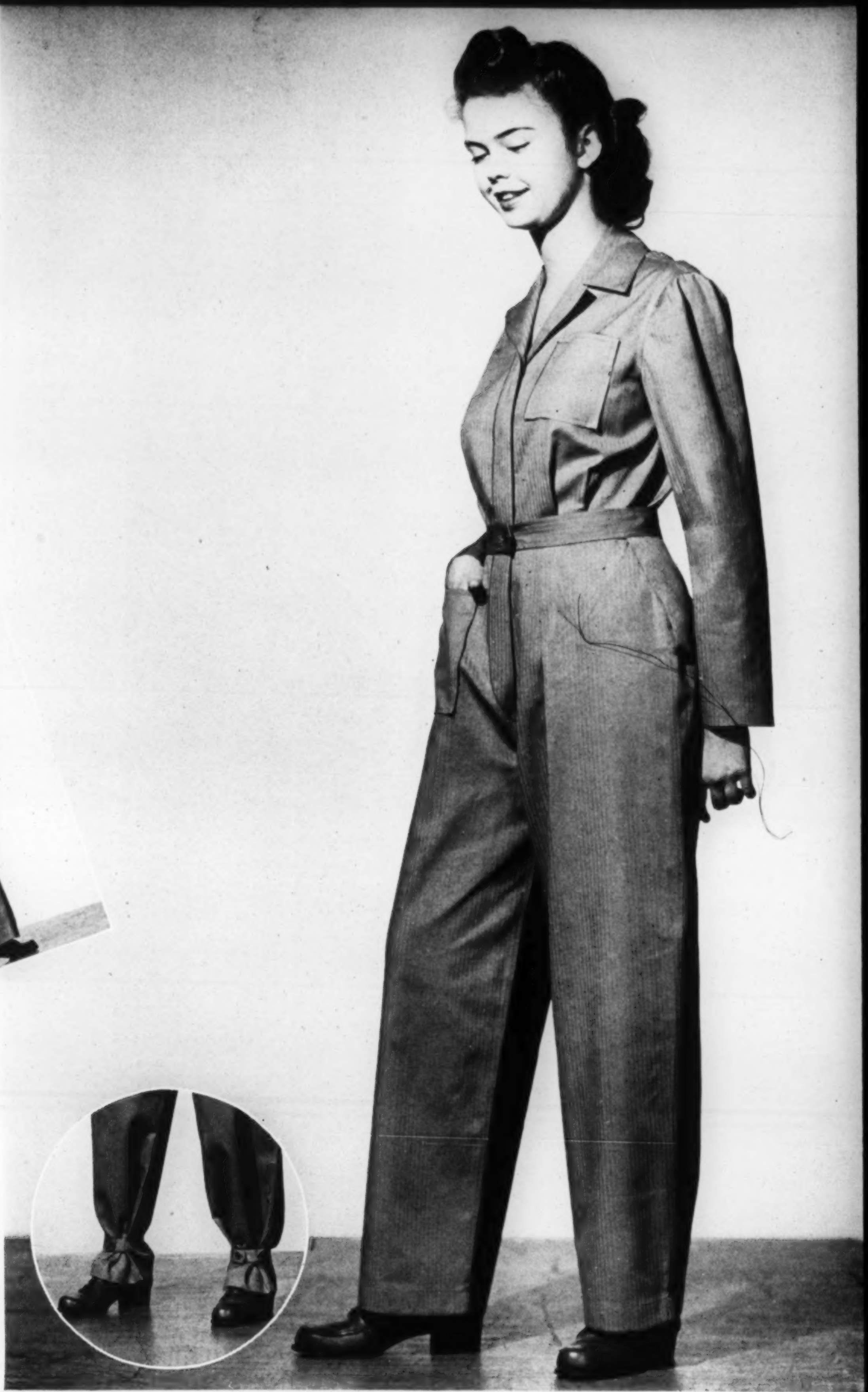
One-Piece Donall with Deep Trouser Pockets . . . Sanforized

- ★ Tailored fly-front closing.
- ★ "Double-deck" pockets on the bodice.
- ★ Deep trouser pockets are convenient — add interesting detail.
- ★ Long, tapering sleeves, scientifically cut for comfort.
- ★ Self-fabric belt is attached to back waistline, loose in front, adjusts with ring fasteners.

3570—**Dyed Cotton Sheeting.**
Unbleached Cotton Sheeting.
White Herringbone Cotton Twill.
Vat Dye Cotton Denim.
Olive Drab Herringbone Cotton Twill.
Miami Cotton Suiting (Denim).
Cotton Jean Cloth.
★ Overseas Cap to match.

Cover picture, featuring this garment, taken at Fairfax School of Aviation, Kansas City.



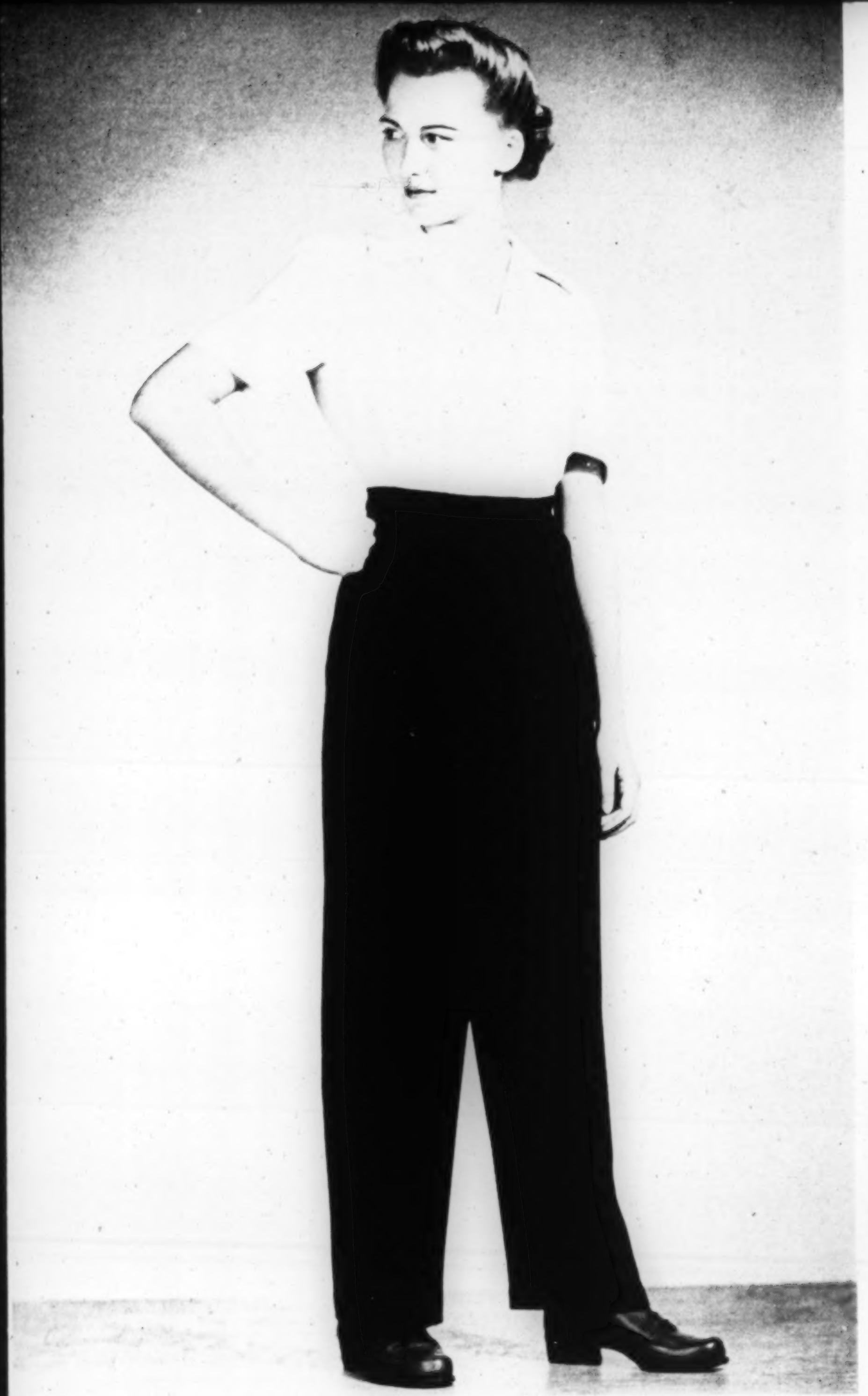


ABOVE—STYLE 3725

Free-Action Donall with Fly Front . . . Sanforized

★ Fly front opens to well below waist.
★ Utility patch pockets.
★ Long, tapered sleeves are safe, comfortable.
★ Drop seat concealed by slit-pocket effect at the sides—by the self belt in back.
★ Trouser legs with adjustable safety bands at the ankles, to prevent catching on machinery—or straight trouser legs if preferred.

3725—**Dyed Cotton Sheeting.**
Unbleached Cotton Sheeting.
White Herringbone Cotton Twill.
Vat Dye Cotton Denim.
Olive Drab Herringbone Cotton Twill.
Miami Cotton Suiting (Denim).
Cotton Jean Cloth.



LEFT—STYLE 2501 SLACK

Classic Slack Combined with Tailored Shirt

★ Interlined waistband on the slacks gives a secure and comfortable fit around waist.

★ Wide center-back seam for easy adjustability.

★ Smooth side placket, with buttons concealed by a flat, slit pocket.

2501—Rayon Gabardine . . . Tebilized.
Two-tone Rayon Gabardine . . . Tebilized.
Two-tone Covert (rayon and acetate) . . . Tebilized.
Commando Twill (rayon and acetate) . . . Tebilized.
Winger Cloth (rayon, Teca and acetate).
Trooper Cloth (rayon, cotton and wool).

★ **Tailored washable shirt in rayon shantung or Sanforized white slub cotton broadcloth.**

RIGHT—STYLE 2532

Sturdy Cotton Slack and Jacket . . . Sanforized

★ When ordering this number, please specify your choice of jacket or shirt (see same style, opposite page).

★ Jacket is straight, comfortable, with shoulder yoke for extra freedom.

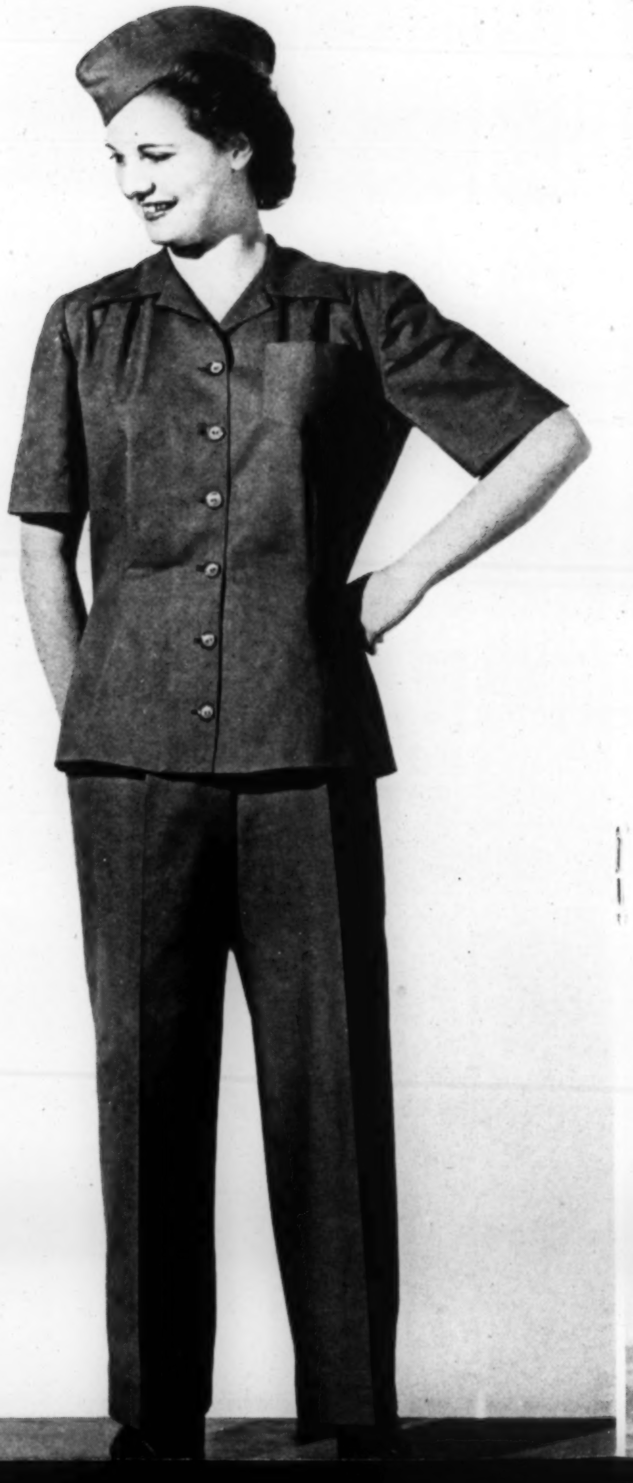
★ Open-throat collar is well cut, universally flattering.

★ Slacks have wide seam down center back for easy width adjustment.

★ Loose, casual design is smart, easy to work in.

2532—Medium Weight Cotton Poplin.
Dyed Cotton Sheeting.
Unbleached Cotton Sheeting.
White Herringbone Cotton Twill.
Vat Dye Cotton Denim.
Olive Drab Herringbone Cotton Twill.
Miami Cloth Suiting (Denim).
Cotton Jean Cloth.

★ **Overseas Cap to match.**



RIGHT—STYLE 2821

Two-Piece Tailored Slack Set

★ Slim, long lines of the jacket are universally flattering.

★ Close-fitting, conveniently placed tailored pockets on the jacket.

★ Interlined waistband on trousers assures a precise and comfortable fit around waist.

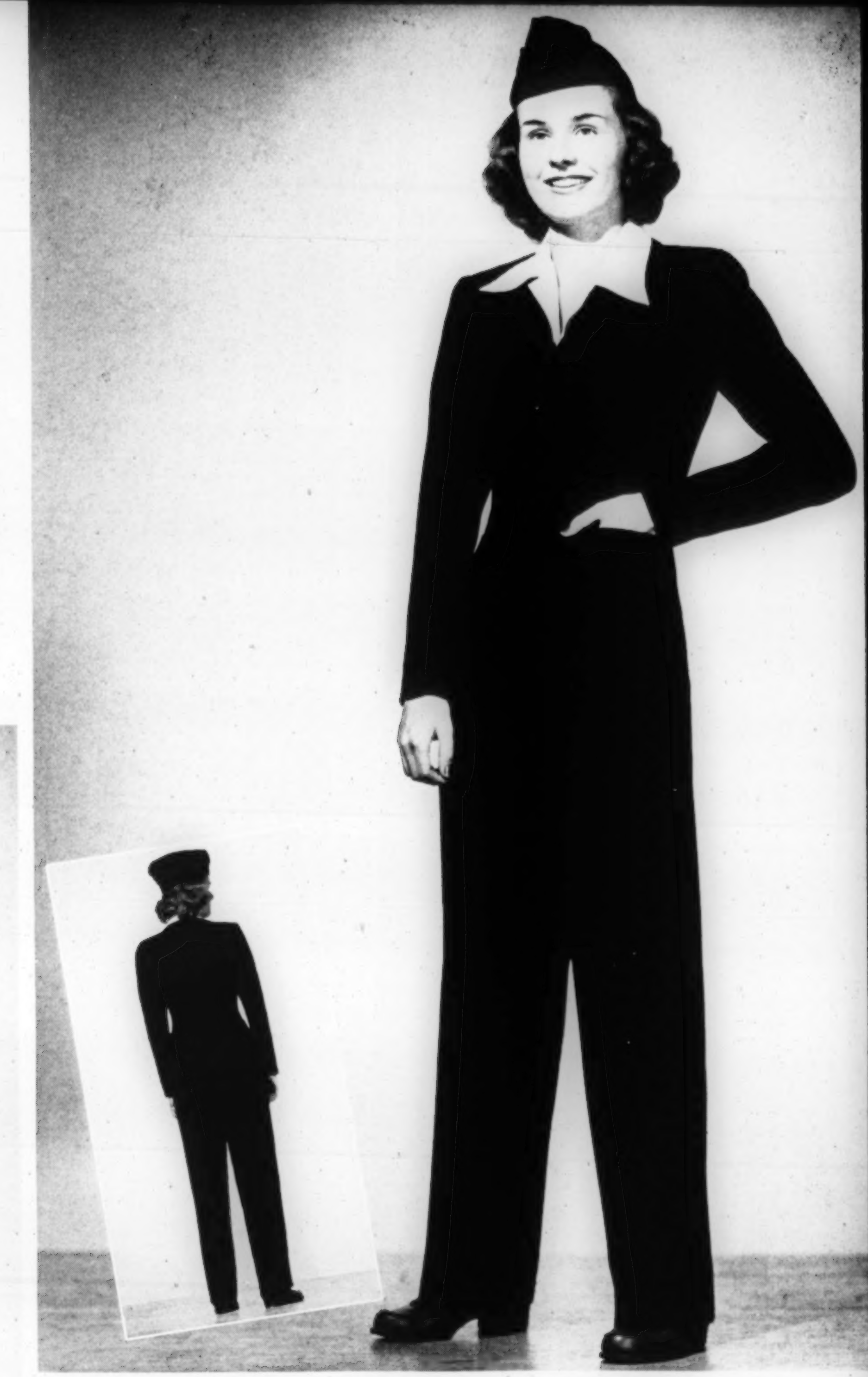
★ Wide center-back seam on slacks makes adjustability easy.

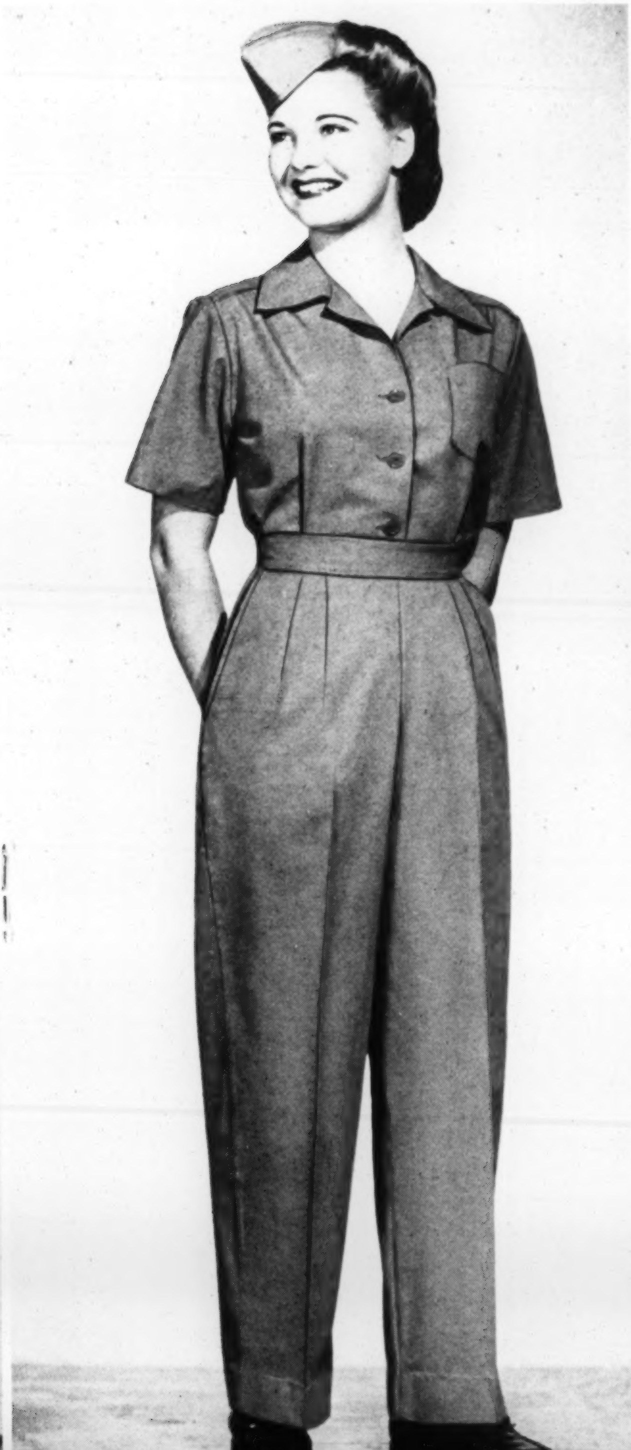
★ Slit pocket on slacks conceals long, smooth side-placket.

2821—Rayon Gabardine . . . Tebilized.
Two-tone Rayon Gabardine . . . Tebilized.
Two-tone Covert (rayon and acetate) . . . Tebilized.
Commando Twill (rayon and acetate) . . . Tebilized.
Winger Cloth (rayon, Teca and acetate).
Trooper Cloth (rayon, cotton and wool).

★ **Tailored washable shirt in rayon shantung or Sanforized white slub cotton broadcloth.**

★ **3360—Overseas Cap to match.**





LEFT—STYLE 2532

Two-Piece Slack Set Cut for Free Action . . . Sanforized

★ When ordering this number, please specify your choice of jacket or shirt (see same style, opposite page).

★ Well-cut shirt has shoulder yoke to give extra freedom.

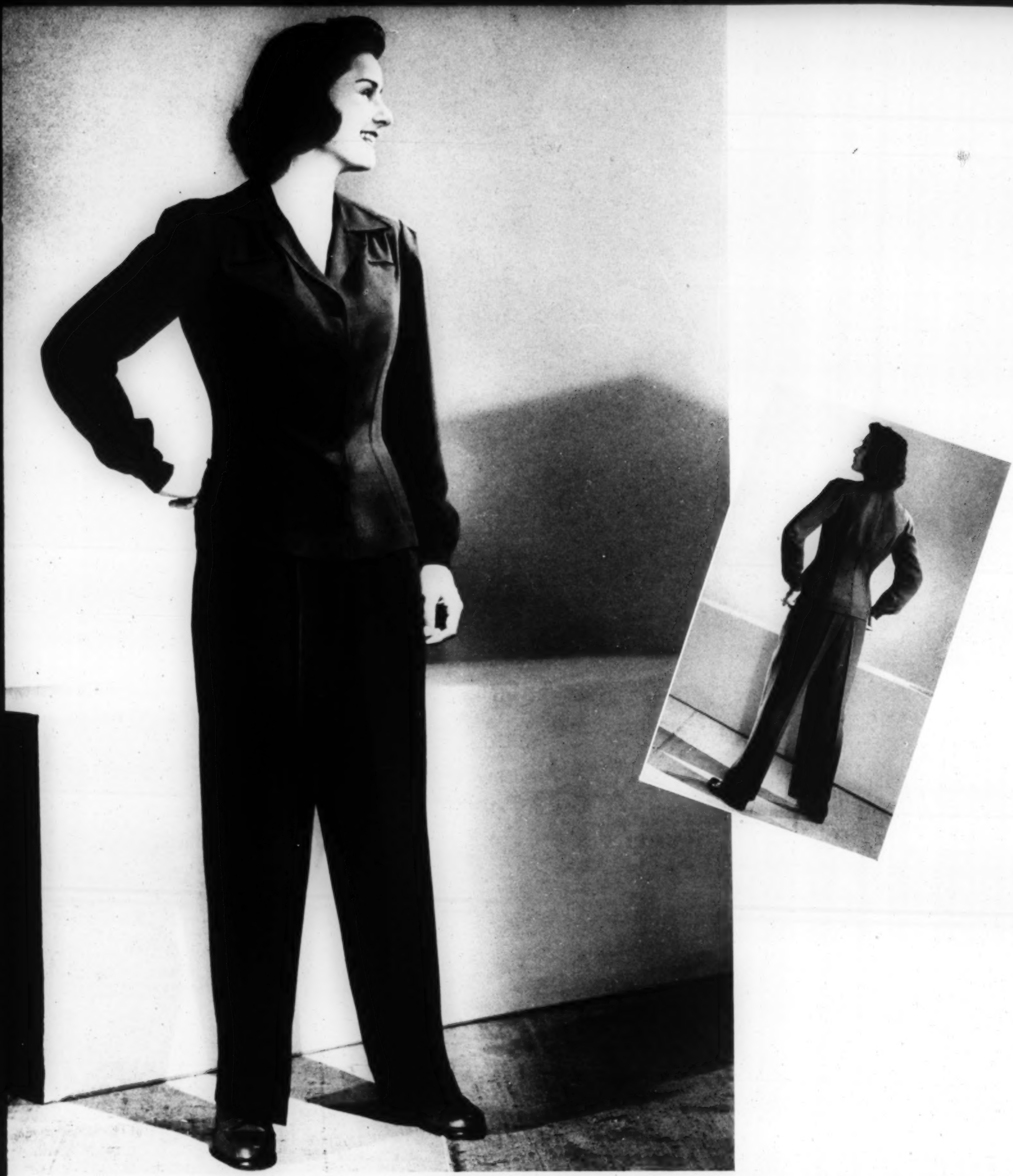
★ Slack and shirt pockets placed for easy accessibility.

★ Interlined waistband on slack gives a secure and comfortable fit about waist.

★ One of the slit pockets on slack conceals a long, smooth side-placket.

2532—Medium Weight Cotton Poplin.
Dyed Cotton Sheeting.
Unbleached Cotton Sheeting.
White Herringbone Cotton Twill.
Vat Dye Cotton Denim.
Olive Drab Herringbone Cotton Twill.
Miami Cloth Suiting (Denim).
Cotton Jean Cloth.

★ **Overseas Cap to match.**



ABOVE—STYLES 3530-3531

Slack Set with Fitted Jacket Line

★ Tailored open-throat collar, comfortable and becoming.

★ Long sleeves cut for freedom.

★ Jacket is fitted with long darts through the waist, to give a becoming, feminine line.

★ Interlined waistband on the slacks assures a firm, comfortable fit.

★ Wide back seam on slacks for easy adjustability.

★ One side-slit pocket on trousers smoothly conceals side-placket closing.

3530—Jacket. Winger Cloth (rayon, Teca and acetate).
3531—Slack. Winger Cloth (rayon, Teca and acetate).

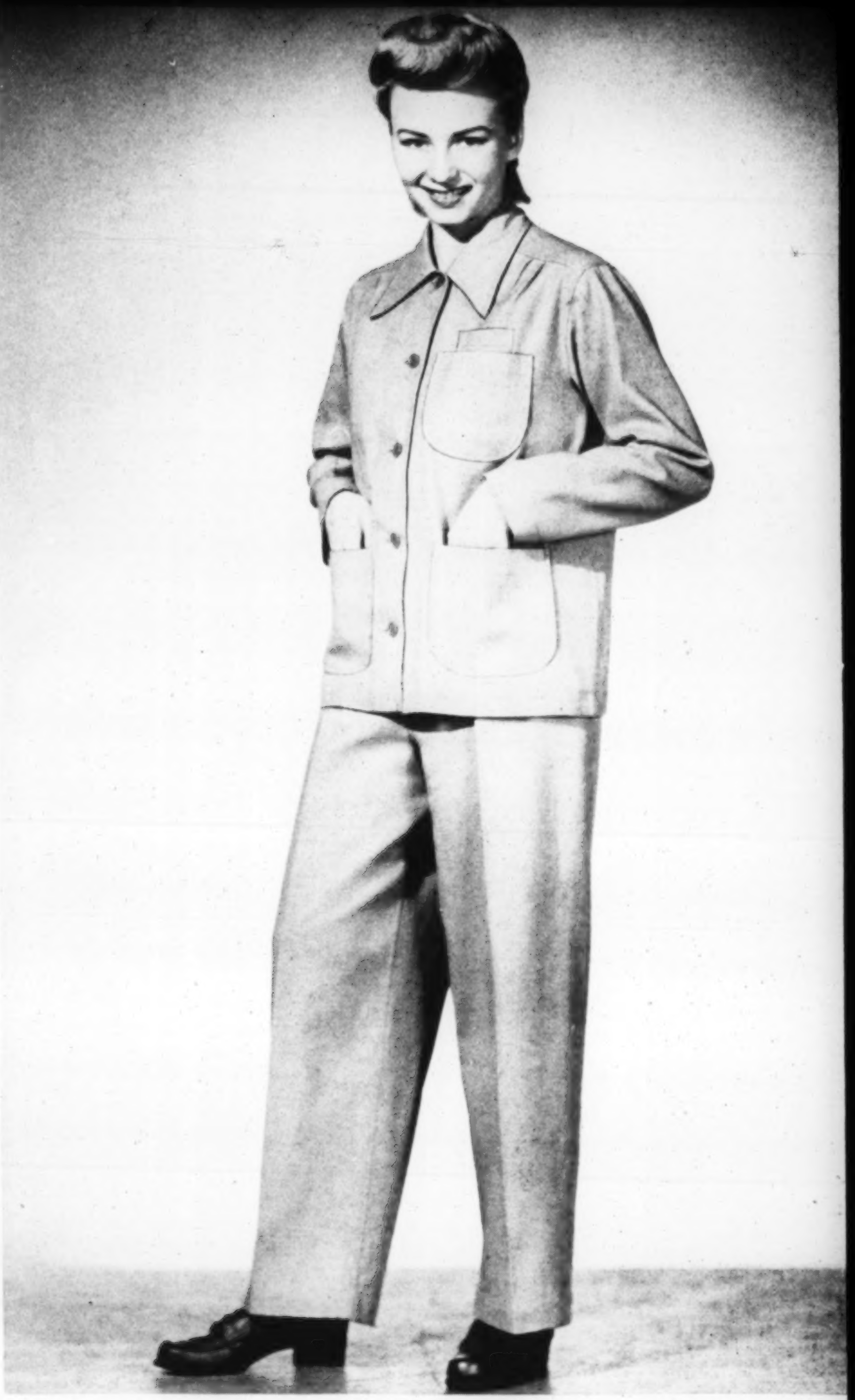
See enclosed Key Sheet for complete list of fabrics available in Nelly Don Action Clothes.

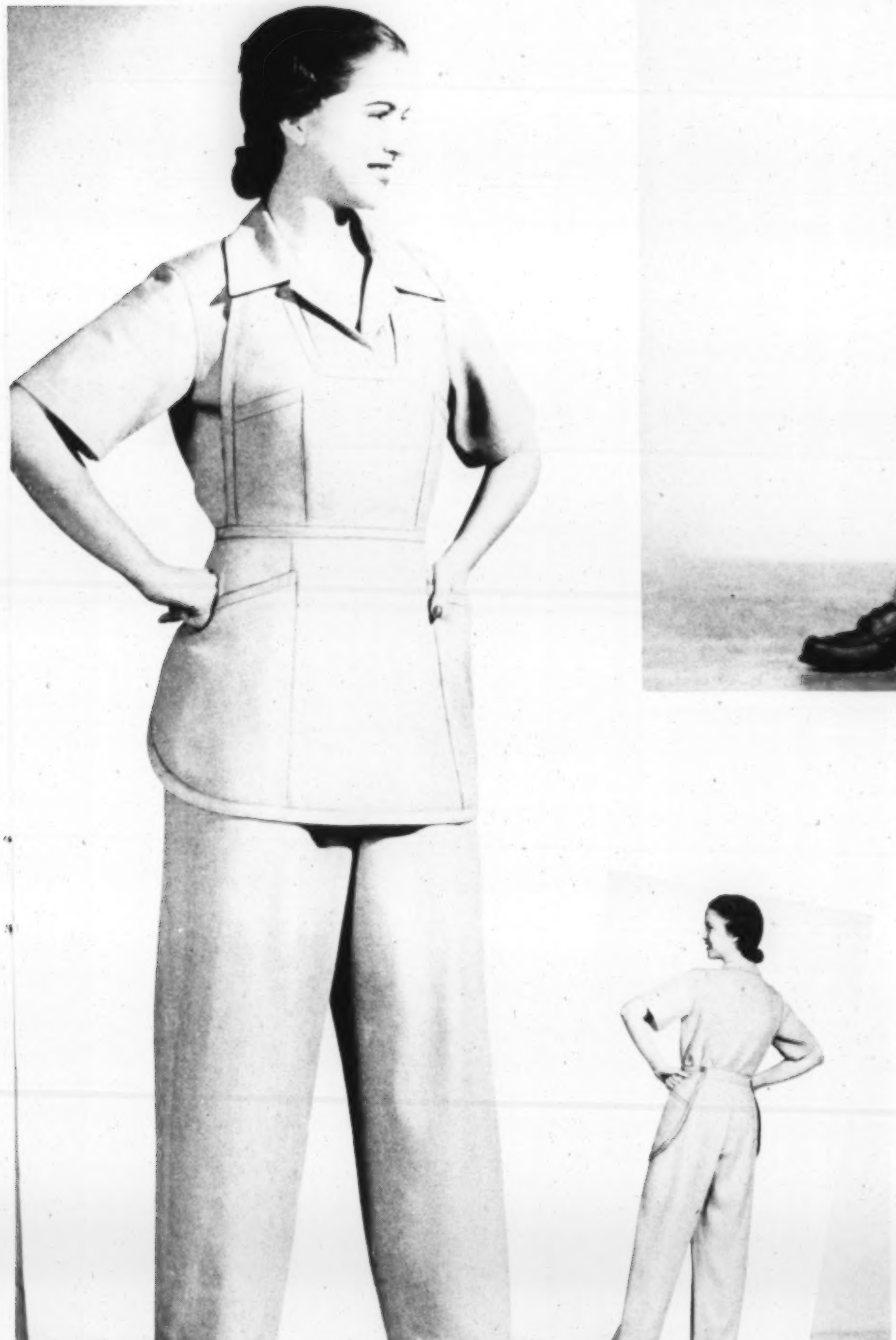
RIGHT—STYLE 3590

Tailored Bush Jacket—in Sanforized Cotton

- ★ A loose-fitting, well-made jacket that may be worn like a smock over any garment.
- ★ Large pockets, conveniently placed.
- ★ Shoulder yoke gives arm and shoulder freedom.
- ★ Long, roomy sleeves.
- ★ All non-sparking, composition buttons.

3590—Dyed Cotton Sheeting.
Unbleached Cotton Sheeting.
White Herringbone Cotton Twill.
Vat Dye Cotton Denim.
Olive Drab Herringbone Cotton Twill.
Miami Cotton Suiting (Denim).
Cotton Jean Cloth.



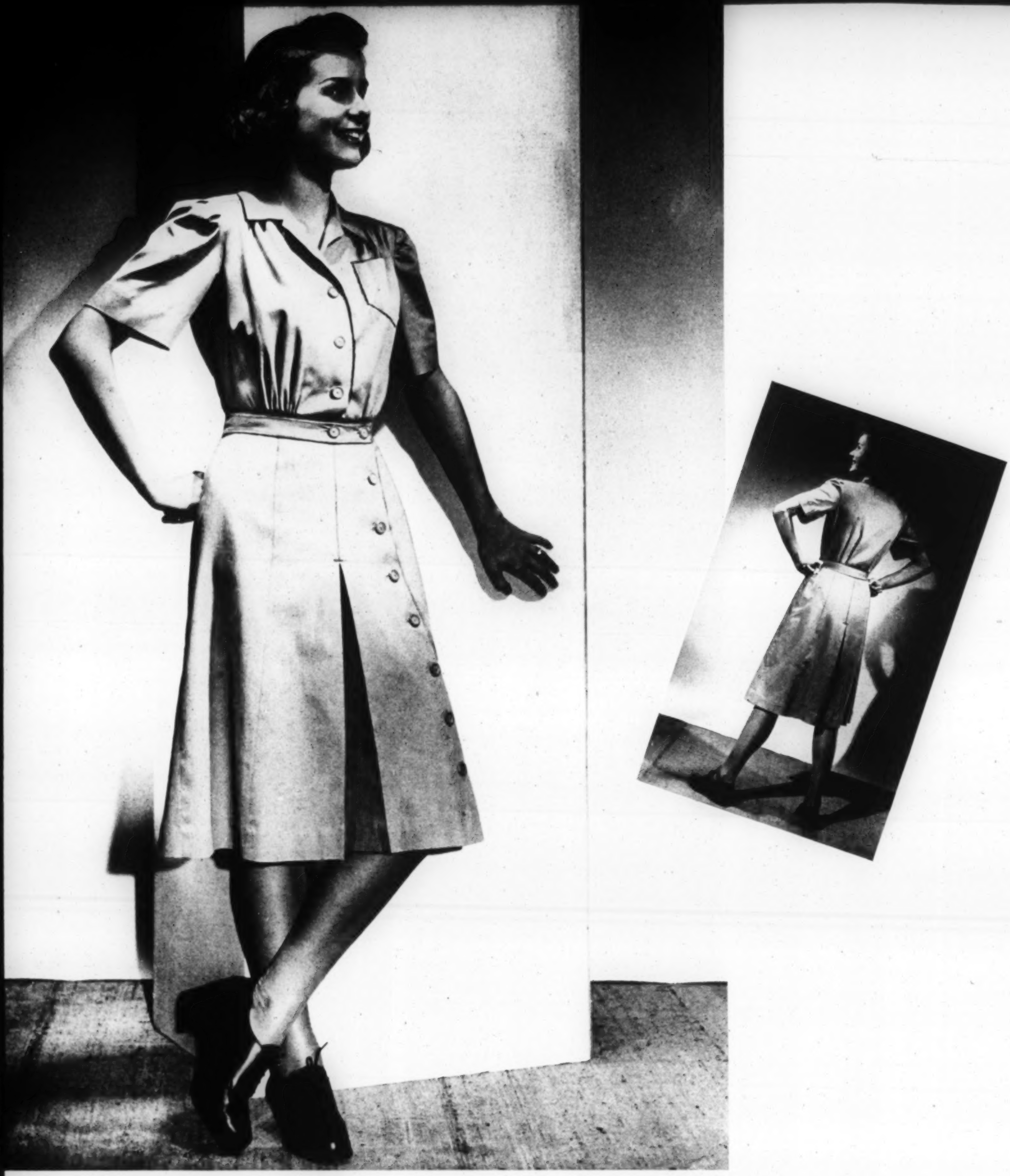


LEFT—STYLE 3380

A Practical Apron, to Cover Any Garment . . . Sanforized

- ★ A washable apron that is supplied with four buttons, so that it may be easily attached to any garment.
- ★ Four deep pockets . . . close-fitting for safety, cleverly shaped for tailored interest.
- ★ Sturdy self-binding trim.

3380—Dyed Cotton Sheeting.
Unbleached Cotton Sheeting.
White Herringbone Cotton Twill.
Vat Dye Cotton Denim.
Olive Drab Herringbone Cotton Twill.
Miami Cotton Suiting (Denim).
Cotton Jean Cloth.



ABOVE—STYLE 3700

Comfortable Culotte with Attractive Side-Button Closing . . . Sanforized

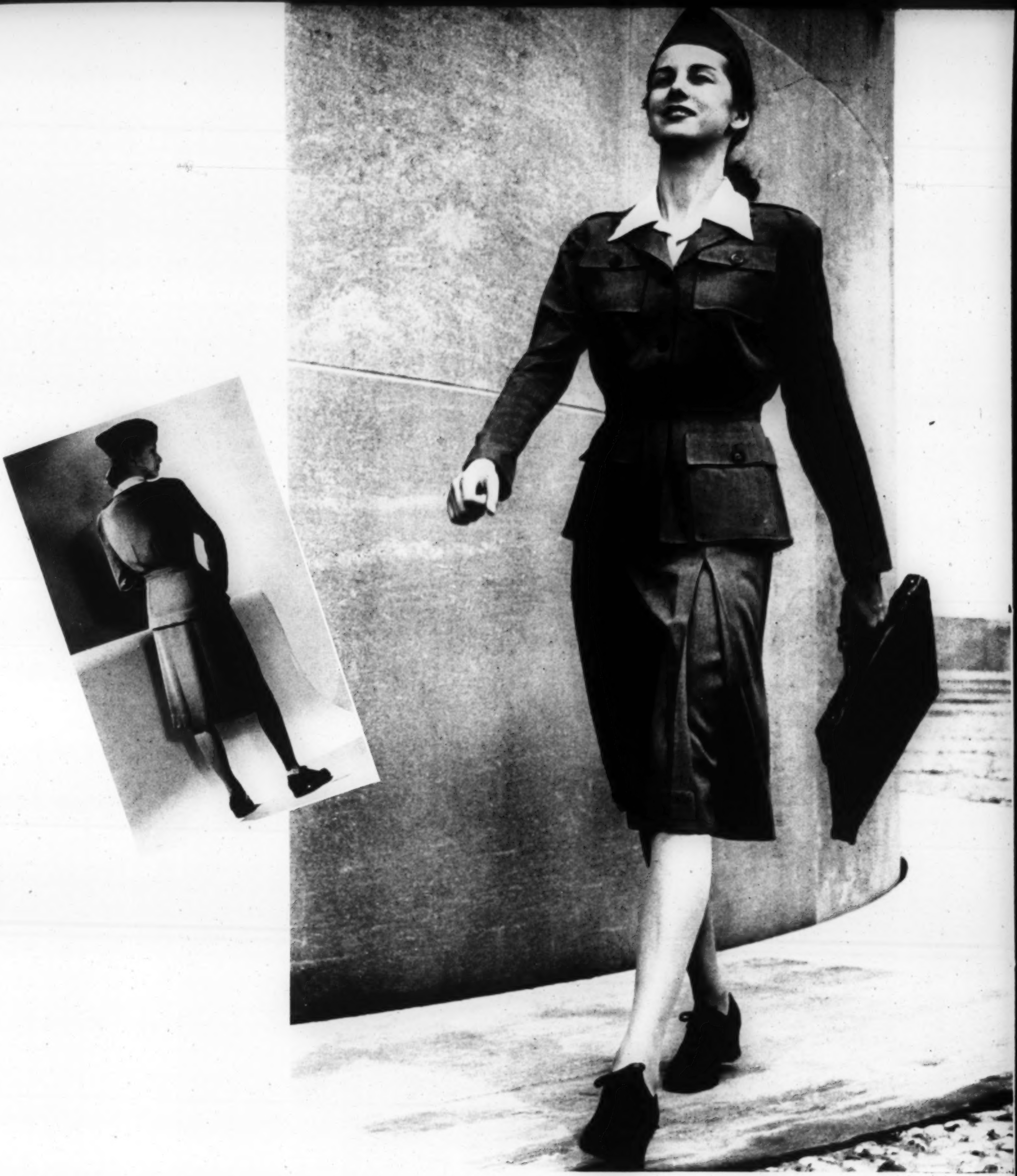
★ Easy to get on and off—with neck to waist, waist to hem closing.

★ Short action sleeves; comfortable shoulder fit.

★ Culottes give freedom of trousers, the look of a skirt.

3700—Biltmore Cotton Twill.
Slub Cotton Poplin.
Medium Weight Cotton Poplin.
Vat Dye Cotton Denim.

See enclosed Key Sheet for complete list of fabrics available in Nelly Don Action Clothes.



ABOVE—STYLE 3840

Two-Piece Uniform In Smart Military Lines

★ Four roomy patch pockets on the jacket.

★ Inset waistband achieves firm, comfortable fit.

★ Tabs on the shoulder give tailored, military trim.

★ Pleats in the skirt for free, graceful walking.

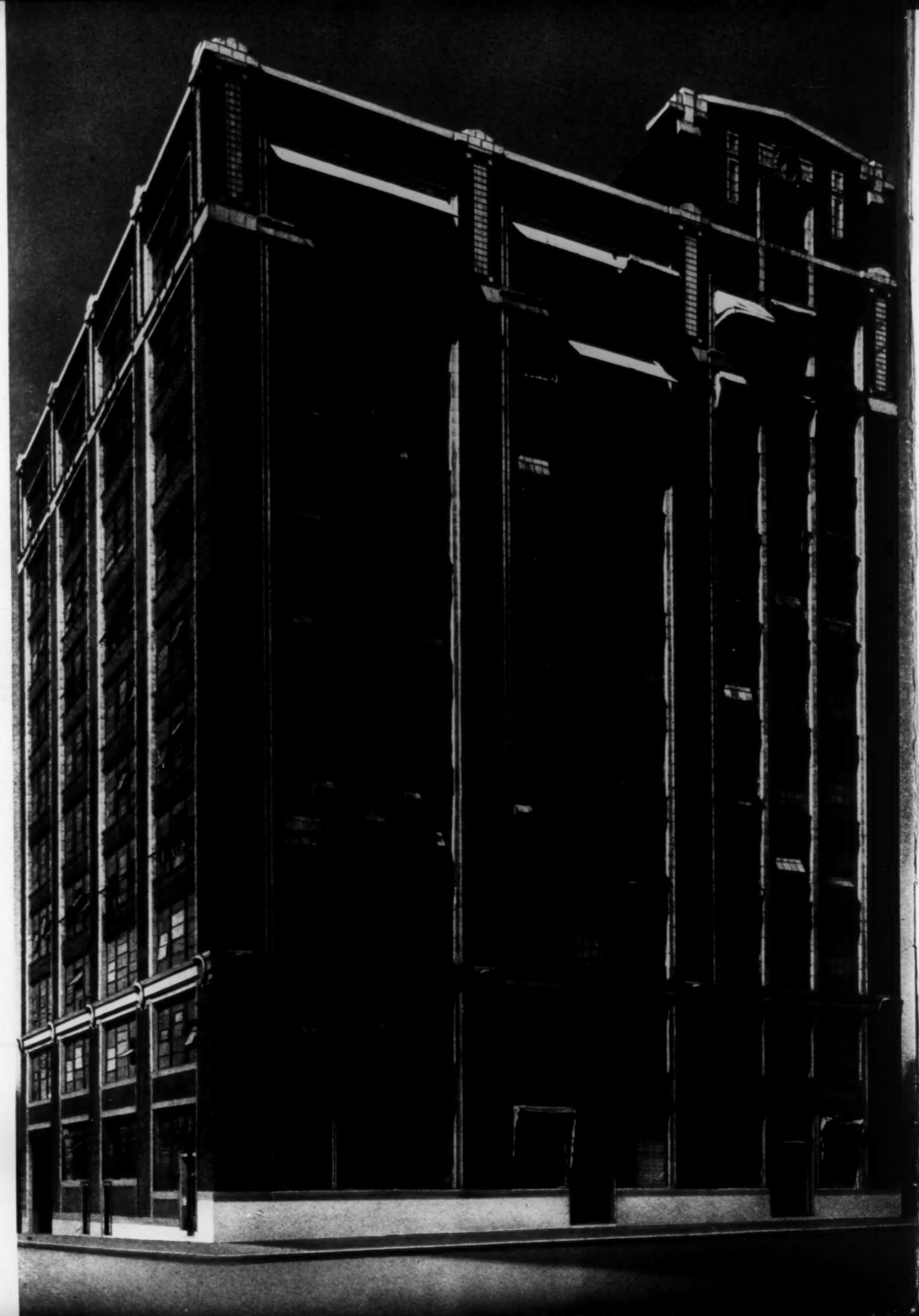
3840—Two-tone Rayon Gabardine . . . Tebilized.
Rayon Gabardine . . . Tebilized.
Two-tone Covert (rayon and acetate) . . . Tebilized.
Commando Twill (rayon and acetate) . . . Tebilized.
Winger Cloth (rayon, Teca and acetate).
Trooper Cloth (rayon, cotton and wool).

★ For purchase of separate jacket or skirt use the following numbers:
3400—Skirt.
3540—Jacket.
Same fabrics as above.

★ **Tailored washable shirt in rayon shantung or Sanforized white slub cotton broadcloth.**

★ **3360—Overseas Cap to Match.**

HERE'S WHY NELLY DON MAKES



HOME OF NELLY DON

This sunlit, 10-story factory houses Nelly Don's 1300 employees.

WOMEN'S ACTION CLOTHES BETTER

THE LARGEST MANUFACTURER OF WOMEN'S DAYTIME CLOTHES IN THE INDUSTRY

★ Nation-wide coverage

More than 1800 stores in all parts of the nation from coast to coast feature Nelly Don dresses and play clothes. The name is known and respected by women everywhere. They'll also value the styling, workmanship, and satisfaction they'll find in Nelly Don industrial wear!

★ Made under ideal conditions

Nelly Don garments are designed and manufactured in a modern, sunlit, 10-story factory . . . are created by 1,300 employees receiving the highest wages in the industry . . . working with the most efficient, up-to-date machines.

★ Centrally located distribution

The factory is centrally located in Kansas City, Missouri . . . is equally accessible to all parts of the United States.

27 YEARS EXPERIENCE CREATING ALL TYPES OF WOMEN'S CLOTHES

★ Variety of styles

Nelly Don has had 27 years of experience making every kind of daytime clothes . . . dresses, smocks, aprons, play clothes, and slacks. Slacks that are nationally known for their feminine fit, their sturdy fabrics, their flattering styles. Industrial clothes of the same quality are an easy and natural step with this experience behind them.

★ Knows how to fit to size

Complete familiarity with the entire range of women's sizes . . . from 10 to 44. Nelly Don understands and knows how to fit every type of woman's figure — knows how through actual experience. For years her slogan has been the challenging JUST TRY ONE ON!

INSIDE STORY OF NELLY DON GARMENTS EXPLAINS THEIR LONG-RUN SUCCESS

★ Designers originate styles

A large staff of original designers creates each style, selects fabrics and trim, then works hand in hand with pattern experts to turn out the finished product.

★ Fit to living models

Every style in every size is fitted on living models. That's the major reason for their unerring fit.

★ Fabric and trim tests for wear and washability

A competent staff selects all fabrics and trims . . . subjects them to innumerable wear and washability tests.

★ Fabric finishes for added satisfaction

Fabric finishes are given the greatest consideration. All Nelly Don's cotton industrial garments are Sanforized. Whenever necessary, they are Tebilized to resist wrinkling.

INDIVIDUAL NEEDS OF YOUR PLANT GIVEN EVERY CONSIDERATION

★ Tell us about your specific requirements

We will be glad to discuss with you any special garment requirements that your plant may have. If your specifications call for a certain sleeve, pocket placement, or seam finishing—tell us about it. We will do our best to adapt your needs to our garments.

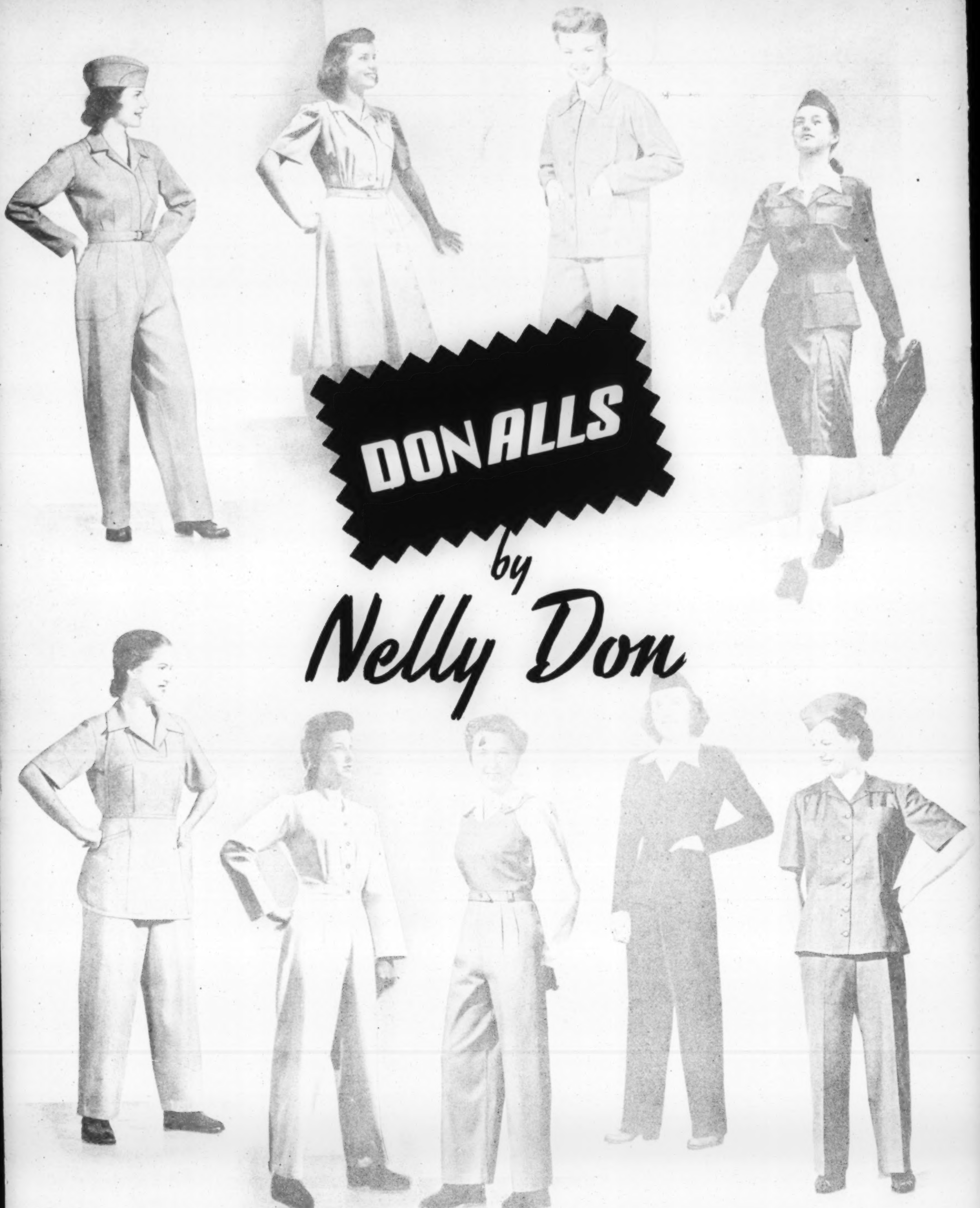
★ Key sheet attached

The attached key sheet is your guide to the fabrics and fabric colors for styles pictured in this booklet. When you see a garment that meets your requirements, check the fabrics listed beneath it with this key for color information.

★ Here's how you get in touch with us

Address your requests for information to Donnelly Garment Sales Co., Dept. D, Kansas City, Missouri.

DONNELLY GARMENT SALES COMPANY
1828 WALNUT KANSAS CITY, MISSOURI



DONALLS

by

Nelly Don

SHOPPING FOR CLOTHES:

WORK CLOTHES: *Values Found In 2-Piece Outfits, Slacks; Check Seams, Bar-Tacking, Buttonholes*

Some utility outfits designed for war work are also suitable for home and sports wear.

Buy generously cut garments, which will last longer and allow greater freedom of movement. Snug fit puts extra strain on seams and even slight shrinkage may make the garment useless. If you plan to use these clothes for "hard wear," check for:

¶ Double-stitched seams that can withstand strain without splitting.

¶ Bar-tacking on plackets and pockets for reinforcement.

¶ Closely-stitched buttonholes, which won't fray readily with use and frequent laundering.

Be sure to find out about the shrinkage residue in any washable garment you buy.

This department shopped two-piece work outfits and washable slacks. Few of the 10 stores shopped had washable slacks left.

Today's recommendations, from $1.59 to $3.98, were selected for sturdiness of fabric and construction or on the basis of good style in washable material at the price.

In addition to the photographed two-piece outfits, the following are also suggested:

$1.59—Denim slacks at Macy's have double-stitched seams, side-buttoning and one pocket. They are Sanforized. Faded blue, 12-20, in limited stock (*2d floor*).

$1.98—Navy dungarees, also at Macy's, are in heavy denim like men's work clothes. They have patch pockets, white stitching and metal buttons. There is bar-tacking at points of strain and buttonholes are closely-stitched. Matching coat-top is also $1.98. This has long sleeves and pockets. These utility garments are not designed to double for sports wear. Sanforized (*2d floor*).

$3.98—Heavy, closely-woven cotton slacks at Martin's, Brooklyn, have belt loops and side zipper. They are tailored with front pleats and tapered legs. In two shades of tan (*2d floor*).

—FREDA STERN

$2.98 *Denim slack outfit at Macy's is Sanforized. It's well-made with double-stitched seams. Faded blue, navy,* 32-40 (2d).

$3.98 *Sanforized cotton gabardine suit from Gimbels has patch pockets, side-buttoning slacks. Good style for any purpose. Navy,* 12-20 (2d).

$3.38 *Cotton twill suit has tuck-in flap on jacket. Suitable for work or play. Navy,* 12-20. *Sizes* 40-44 *are* $3.63. *At Namm's, Brooklyn.*

'Tie-In' Deals Illegal

The Office of Price Administration has ruled that tie-in deals, compelling consumers to buy plentiful merchandise in order to get articles that are scarce, are evasions of price regulations. A. G. Antolini, Associate Regional Price Director, explained that such deals are considered price violations even though the merchandise is offered for sale within set ceiling prices.

A typical example would be a demand by a retailer that a housewife buy some glassware she does not need in order to get some steel wool.

If You've Got a Run in Those Precious Nylon Hose, Try Mending . . . Here Are Lowest Repair Prices Found

Don't discard damaged silk or nylon hosiery before you've investigated repair possibilities—certain damages can be repaired almost perfectly.

Compared to the cost of a new pair of nylon (if you can get them) or silk, the repair cost is small and in many cases worthwhile.

If the damage has weakened the structure of the stocking and it is of no further value to you, turn it in to the Nation's scrap collection. The Government needs waste silk and nylon for parachutes.

To help PM readers determine the type of damage worth while repairing and the most reasonably-priced service, PM surveyed 12 shops specializing in this work.

A 57-gauge 30-denier nylon stocking, with a single run starting from a small hole in the toe, was used to get estimates in each shop checked. **Prices quoted for the repair ran from 19c to 45c.**

Some of the shops had a set price for the repair regardless of the width of the run, but would not repair a run that had more than four broken threads. Others said they would repair runs with up to eight broken threads but quoted a 20c minimum for a single thread, with 10c additional for each broken thread and 10c for mending a single hole.

Shops agreed that a torn stocking is worthless if it has:

¶ A hole more than ¼ inch wide.

¶ Pull threads across the run.

¶ A run with more than eight broken threads.

Runs in the welt of the stocking should be left alone, according to most repair shops. The threads in this part of the stocking are not connected to the body and cannot affect it. Seaming out the run in a welt will often narrow the top and cause discomfort.

A reliable mending shop will inspect the stocking before accepting it for repair. **If accepted, the shop should guarantee the repair will not open after the first wearing.**

Rough hands inserted into the hose may further damage the tear. Some firms inspect the hose on a stocking form. After the inspection, the stocking goes to a mender who ties a thread around the hole or pull thread. Then the run is closed up and the hole mended. Holes and pull threads are visible mends.

Most department stores and cleaning shops have a hosiery repair service. But many of these stores send their work out to the specialty shops inspected by PM and therefore charge a higher price. Some department stores said they would repair only stockings which had been purchased there.

These sources quoted the lowest prices and guaranteed the repair for one wearing.

Elegant Hosiery Co., 692 Broadway, near Fourth St. (5th floor), charges 19c for repairing runs with up to three broken threads. The same repair by mail is 25c plus a self-addressed envelope to be sure of safe return. This firm also will redye odd stockings for 30c a pair if brought in, 35c by mail.

Gimbels quoted 20c for repairing our stocking. They asked 10c for the single run and 10c for repairing the hole. There is a charge of 10c for each additional broken thread. Repairs are done in the store.

Little Mending Shop, 63 W. 42d St., estimated 25c to repair the test stocking and said they charge 5c extra for each additional broken thread.

Wards, Grand Central Station, track 38, has one price, 27c, but does not repair runs with more than three broken threads. This source gives a 24-hour service.

—HELEN ROSS.

St. John's, NYU Favorites Tonite

Garden basketball hits the midseason peak tonight with a doubleheader that has the most appeal of any played to date. The games are: *NYU vs. West Virginia and *St. John's vs. Fordham.

The feature renews an ancient home town rivalry in a game that will have a heavy bearing on the Met championship.

The program presents one of the greatest collection of scorers ever assembled on one card and the four teams have aggregate records of 30 victories against three losses.

The St. John's-Fordham series now is deadlocked at nine games each. Tony Karpowich, Fordham star who set a new Garden record of 29 points two weeks ago, will be the one the Redmen must stop. Fordham, of course, is concerned about halting Harry Boykoff, St. John's 6 feet 9 center.

Tonight's game will be the last as a Violet for Ray Lumpp, sophomore flash, who goes into the Army Saturday.

Back with West Virginia comes Scotty Hamilton, tubby little forward who wowed Garden fans last March. He'll draw Lumpp, and that's as tough as hitting an inside straight flush and about as easy to stop.

---

* PM picks.

Basketball Lineups

No.	ST. JOHN'S.	Pos.	FORDHAM	No.
4	Al Grenert	lf	Scotty Hamilton	8
16	Jerome Fleishman	rf	Ted Nicksick	4
5	John Regan	c	Floyd Stark	13
8	Ray Lumpp	lg	Joe Walthall	12
9	Sam Mele	rg	Carney Davis	9

NYU Subs—Robert Maher (6), Charles Heiser (7), John Simmons (11), Harry Leggatt (15), Herb Weissman (17), Irving Rifkin (20).

West Virginia Subs—Andy Reaves (3), Joe Nodurft (6), Ben Lewis (10), Berkeley Davis (11), Bob Lewis (14).

Officials—Matty Begovich and John Nucatola. Time—8:15.

No.	NYU	Pos.	WEST VA.	No.
14	Andy Levane	lf	Tony Karpowich	14
9	Larry Baxter	rf	John Bach	17
11	Harry Boykoff	c	George Babich	5
18	Ed Golub	lg	Bob Mullens	7
7	George Pastushok	rg	Bob Mulvihill	3

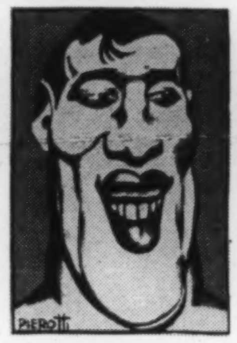
St. John's Subs—Lucio Rossini (3), Ken Keller (5), Al Moschetti (6), Joe Spena (8), Hy Gotkin (12), Andy Giuriceo (15), Tom Henry (16), Frank Plantamura (17), Edward Brzozowski (19.

Fordham Subs—Paul McGuire (4), Phil Shea (6), Ken Haggerty (8), Hal Savage (9), Dan Grahame (10), Walter Mercer (11), Al Lucas (12), George Cheverko (15), Bob Gebhardt (18), Desmond Bridges (19).

Officials—Pat Kennedy and J. L. Quigley.

In the News:

Overlooked among the pastimes read out of existence by the motorcar ban is the fight camp. The mitt experts have nowhere to go except Stillman's gym, which, within yowling distance of the Garden, is strictly nowhere to go. . . . The $5000 Hialeah Inaugural was the race that wasn't run as **Hialeah Park,** scheduled to open today, didn't. Last year's opening day crowd of 16,553 set a record. Joseph E. Widener's famous flamingos continue to color up the infield, but flamingos are not a means of transportation. . . . **Primo Carnera** is about to take up professional wrestling in Germany, according to Radio Berlin. Carnera was a circus wrestler before he became a boxer, in a loose sense of the word. Incidentally, the night Max Baer relieved Carnera of the world heavyweight championship, one expert predicted we'd never live to see Baer beaten. . . . **Ralph Pink,** 6 feet 3 Coast Guardsman, and Manhattan Beach's high average scorer, will be in the starting lineup for the first time when the Coast Guard tries for its sixth straight victory against Floyd Bennett Naval Air Station at Manhattan Beach Auditorium tonight. . . . The OPA ruled that a college athletic team may fill engagements and also go to practice in a car belonging to the coach, but not in cars belonging to team members. Professional players may use their cars for games; amateurs not. . . . **Syracuse University** suspended crew and cut five road games off the baseball schedule, leaving 15 games to be played. . . . **Billy Webb,** veteran White Sox scout, is dead of a heart attack. . . . SS Lou Gehrig, 10,500-ton Liberty ship named by New York State school children, will be launched by Lou's mother, **Mrs. Christine Gehrig** of Mt. Vernon, in South Portland, Me., Sunday morning. . . . Lake Placid may close the Mt. Van Hoevenberg bob run.—JOHN LEWY.



Da Preem

PDQ's Dope:

PDQ PLAYS: HARD WRACK.
ONE BEST: CUMSHAW.
PARLAY: SHOW HOUSE and AGRICOLE.
MOST-FOR-THE-BUCK: MEMPHIS LAD.

FAIR GROUNDS SELECTIONS

TRACK: FAST. POST: 3:30.

FIRST RACE—3-year-olds, up. Maidens. 1 1-16 m.

Rating	Horse	Wt.	Jockey	Odds	P.P.
100	Magnesium	94	No Boy	3-1	1
99	Black Fire	94	Jessop	9-2	7
99	Chancelet	113	Higley	4-1	2
98	Straw Warning	99	Givens	10-1	10
97	Flying Kiev	99	McCadden	10-1	6

Top Stripper 99, Count Fickle 99, Delayed 94, Wee Ann 94, H[illegible]ay Time 113.

SECOND RACE—4-year-olds, up. Claiming. 1 1-16 m.

100	Show House	108	Trent	2-1	11
99	Newark	111	Barney	7-2	12
98	Madam Gray	112	Gillespie	4-1	5
98	Maisco	106	Warren	8-1	10
97	Aircraft	113	Whiting	8-1	9

Red Set 103, Gay Hour 114, Hattie Belle 103, John's Dream 112, My Crest 103, Clarion Call II 111, Alphabow 108, Doris B 112, Red Mars 116.

THIRD RACE—4-year-olds, up. Claiming. 1 1-16 m.

100	Agricole	116	Clark	5-2	3
99	Afghanistan	118	Higley	2-1	4
97	a-Ballotant	118	Haas	4-1	5
98	a-Riposte	115	No Boy	4-1	6
95	Bayport	118	Hart	6-1	8

Hard Ln 118, Black Time 123, Poet Laureate 113.
a—Haughton-Whitaker entry.

FOURTH RACE—3-year-olds. Claiming. 1 1-16 m.

100	Cumshaw	119	No Boy	8-5	4
99	Real Sad	109	Clingman	3-1	1
98	Valdina Dust	108	Tammaro	4-1	3
98	Camps First	113	Wallace	6-1	6
97	Top Straw	114	No Boy	8-1	7

Alca-Eve 109, High Hat 113.

FIFTH RACE—4-year-olds, up. Claiming. 1 1-16 m.

100	Maepeace	112	Trent	2-1	2
99	Reaper's Blade	115	Jessop	5-2	6
99	Little Slam	118	Pascuma	6-1	5
98	Valdina Melia	110	Gross	6-1	4
97	Pittistraw	108	Basham	6-1	1
97	Aldridge	120	Greever	10-1	3

SIXTH RACE—3-year-olds. Allowances. Mile and 70.

100	Sugar Ration	115	Whiting	5-2	5
99	Roziante	114	Jessop	4-1	3
98	Pearl Harbor	115	No Boy	2-1	4
97	Philadelphia	117	Trent	5-1	1
96	Volcano	110	Wallace	6-1	2

SEVENTH RACE—4-year-olds, up. Clmg. 1 3-16 m.

100	Hardwrack	108	Basham	8-5	1
99	Virginia Rose	106	Hart	3-1	6
98	Trapeze Artist	113	Haas	3-1	5
98	Swift Sue	103	Trent	9-1	9
97	Armor Bearer	118	No Boy	8-1	4

Keene Advice 108, Betrothed 106, Squaw Jane 108, Bob-Hi 118.

EIGHTH RACE—4-year-olds, up. Claiming. 1 1-16 m.

100	Memphis Lad	111	Barney	6-1	8
99	One Jest	113	Hauer	3-1	5
99	Milk Route	115	Whiting	3-1	9
98	Sidona	115	Basham	8-1	2
98	Bird High	115	Nodarse	10-1	6

Yesteryear 113, High Talent 118, Ho Hung 115, Holly 105, Parade Ground 115.

NINTH RACE (Substitute)—Cagot, Gooseberry, Three Bangs, Little Mom, Purling Light.

(Horses after first five are also graded)

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PRESS
PITTSBURGH - PA.
JANUARY 29 - 1943

Jobs Unsuited To Women Told By WMC Man

Handling of Weights Over 40 Pounds Ruled Out

Modern Miss America may be a healthy, rosy-cheeked, strong woman but as far as the War Manpower Commission is concerned she's not suited for a job requiring the lifting of a 40-pound weight.

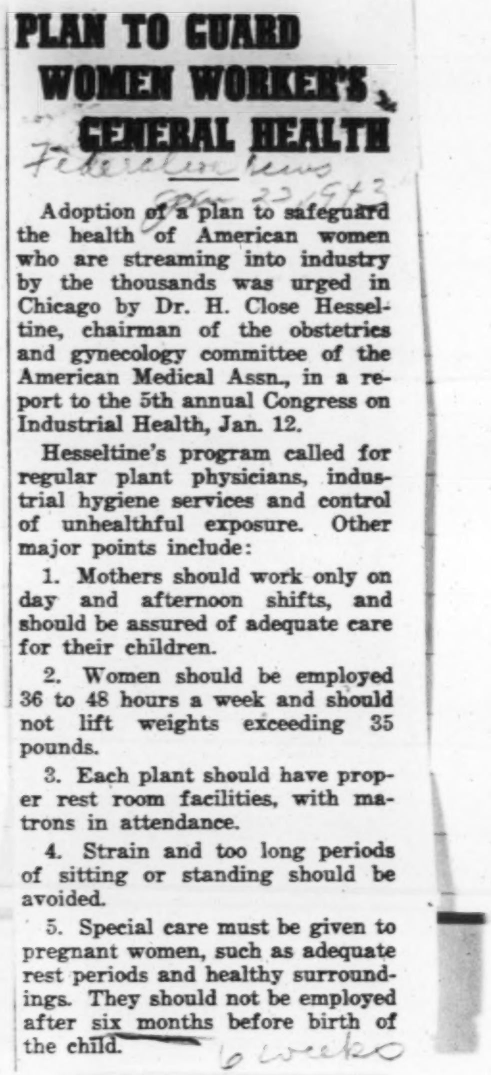
Speaking before the Pittsburgh Personnel Assn. here yesterday, Rudolph Sussman, regional occupational analyst for the WMC, advised war-plant employers that women should be considered as "unsuitable" replacements in jobs which require:

1—Lifting of weights of 40 pounds or more.
2—Pushing or pulling of trucks loaded with [illegible] pounds or more.
3—Handling of extremely bulky materials or items that are otherwise difficult to grip.
4—Continual or fairly-frequent stooping or bending, crawling or kneeling.
5—Handling or lifting of objects at heights or 6½ feet or more above foot level.

Mr. Sussman suggested, however, that in all other instances employers should "examine your jobs critically in an effort to determine whether or not women could be substituted for men when men are not available."

Plants employing more than 500 workers will be asked immediately to file Manning Tables and a scedule of how soon specific workers can be replaced and thus freed for the draft. Plants employing between 200 and 500 men will not be asked to turn in Manning Tables until a later date, and still later will come the plants with less than 200 workers.

Mr. Sussman warned, however, that plants must accelerate their training programs.



PLAN TO GUARD WOMEN WORKER'S GENERAL HEALTH

Federation News
Jan 23 1943

Adoption of a plan to safeguard the health of American women who are streaming into industry by the thousands was urged in Chicago by Dr. H. Close Hesseltine, chairman of the obstetrics and gynecology committee of the American Medical Assn., in a report to the 5th annual Congress on Industrial Health, Jan. 12.

Hesseltine's program called for regular plant physicians, industrial hygiene services and control of unhealthful exposure. Other major points include:

1. Mothers should work only on day and afternoon shifts, and should be assured of adequate care for their children.
2. Women should be employed 36 to 48 hours a week and should not lift weights exceeding 35 pounds.
3. Each plant should have proper rest room facilities, with matrons in attendance.
4. Strain and too long periods of sitting or standing should be avoided.
5. Special care must be given to pregnant women, such as adequate rest periods and healthy surroundings. They should not be employed after six months before birth of the child. 6 weeks

FEDERATION NEWS

JANUARY 23-1943

PLAIN DEALER
CLEVELAND - OHIO
JANUARY 22- 1943

JOBS PLEA IS LOST BY LADY 'LIFTERS'

USES 'Solomon' Finds They Are Poor Judges of 'Heft'

BY CHADS O. SKINNER

Two young women in slacks barged into the United States Emplayment Service headquarters here the other day and asked for "statements of availability" to take other jobs, on the ground that their present employment in an important war industry required them to lift boxes weighing 35 pounds, 10 pounds more than Ohio female labor law permits even a Lady Atlas to hoist.

Their foreman, who had declined to issue the statements and who had come along to explain that refusal, said, all right, suppose each box did weigh 35 pounds; didn't the girls handle the boxes together and thus lift only 17½ pounds each?

No, said the young women, sometimes each of them had to handle a box alone, and they did not want to continue in a job where they would be a party to any infraction whatsoever of the Ohio female labor law. The foreman remained adamant in his contention that he could ill afford to lose them in this day when you hang on to all the good workers you can get.

Weighs Box

The USES reviewer of this case, called upon to decide whether the young women were entitled to change jobs under terms of the War Man-Power Commission's labor stabilization plan for Cuyahoga County, made a Solomon-like decision. He would go out to the plant and weigh one of the boxes.

He did. The box weighed just 17 pounds. He refused the statement of availability, and the young women returned to work.

That is just an isolated example of the appeals, at a rate averaging about 500 a day, which come into the review unit of the USES office from workers in essential activities who want statements of availability so that they can switch jobs.

Of approximately 7,000 workers who have come into the review unit since the WMC job "pegging" program went into effect Jan. 6, about half have received statements for reasons USES considered valid, while the others have not.

Sixty-five per cent of the cases have been finally disposed of while the individual seeking the release was in the USES office. Another 25 per cent have been disposed of within three days, while the remaining 10 per cent, representing roughly 70 cases, probably will have to be brought to the attention of the War Man-Power Commission's labor-management committee of the Cleveland area, sitting as an appeals board.

take the outright refusal better from a government agency than from him.

The second and major headache is caused, according to USES officials, by a minority of industries—presumably the same ones that try to get away with anything they can in their dealings with selective service boards—that are not conforming to the spirit and letter of the stabilization plans.

This group has adopted the sly technique of discussing future employment with a job applicant before asking the applicant whether he has a statement of availability. Employers are expected, under the stabilization plan, to ascertain whether an applicant is now employed in an essential activity and, if he is, to demand he show a statement of availability before talking to him.

But the employers circumventing the plan give an applicant a "build-up" on his prospects of wages, hours and working conditions before asking whether he has a statement. In many cases this induces in the worker discontent on his present job and whets his urge to change pastures—a practice which causes untold damage to war production.

PLAIN DEALER
CLEVELAND - OHIO
JANUARY 22- 1943

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Weigh Appeals Monday

Handling of those appeals by the committee, which drafted the employment stabilization plan, will begin Monday.

The largest group of war workers to be given statements of availability by USES were those who came in with letters from their employers saying they were willing to let the workers go, frequently because a reshuffling of war goods production had reduced the employment available.

Probably the ranking basis for the issuance of statements that have been denied by employers themselves (who are supposed to grant them if there is a truly valid reason) is the inability of a worker to obtain from his current employer the wage rate generally prevailing in Greater Cleveland for the type of activity performed by that worker.

Statements have also been issued in those cases where the employee showed that he had been working for considerable periods for less than a full working week, or was not being used at his highest skill.

Some have been issued, but not so many, for personal reasons adduced by the worker, such as his health, the long distance between his home and current job, or a home condition which makes it apparent that the worker will be lost to the war effort entirely unless he can change employment.

The leading instances where statements of availability have NOT been grantd are those involving employees who, whatever their story might have been, have convinced the USES case reviewer that their desire to change jobs is motivated solely by a desire to get more money.

In cases like these the hourly rate an employee is earning has not been the governing factor. The USES decision has been based on the answer to the question: Is the employee working now at his highest skill, being paid the rate generally prevailing in his industry and employed at substantially full time?

Two Headaches

The two principal headaches in the employment stabilization plan, from the viewpoint of USES and the War Man-Power Commission, are caused by employers.

One is the disinclination of employers to refuse flatly to issue statements of availability when they know a worker has no sound reason for changing jobs. The employer is frequently motiviated by the thought that his worker will take the outright refusal better from a government agency than rom him.

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7

N.Y. Times

FRIDAY, APRIL 23, 1943

NEW YORK TIMES
APRIL 23-1943

WIDER INQUIRY DUE ON X-RAY KICKBACKS

'Entire Field' in Compensation Cases Will Be Studied by Moreland Commissioners

EXPERT ADMITS BIG BONUS

Doctor, Named by State Labor Office Over Medical Unit's Protest, Testifies

With evidence that the State Department of Labor approved the practice of a roentgenologist over objections of the County Medical Society and the Attorney General, Moreland Act Commissioners, William F. Bleakley and Herman T. Stichman, revealed yesterday that they were investigating the "entire field" of X-ray work in compensation cases to see if the kickback system was general.

At the hearing into the administration of the Workmen's Compensation Law in the Bar Association Building, Mr. Stichman, as chief counsel to the inquiry, first called Dr. Edward E. Kaplan, X-ray specialist, who has been with Bendiner & Schlesinger Laboratories since 1930. The concern has been charged with paying out $30,000 in kickbacks in 1942.

Dr. Kaplan was questioned in connection with previous testimony that the Industrial Council had authorized him to X-ray compensation claimants, although his application lacked approval by the New York County Medical Society which had been upheld in its opinion in 1937 by John J. Bennett Jr., then Attorney General. The authorization had become necessary through an amendment of the Compensation Law.

Tells of Salary and Bonus

Dr. Kaplan testified he received a salary in 1942 of $7,200 and a bonus of $7,400—the bonus representing 15 per cent, he said, of "some net profit of the business." He said he was not familiar with the business part of the concern. He asserted that he had no knowledge of alleged kickbacks, or rather "fee-splitting or rebating," as he chose to term them.

When questioned about the deletion of a clause in his application under which the medical society had the right to investigate, Dr. Kaplan said the paragraph had been stricken out "on advise of my counsel—he said I could not subscribe to that clause." The counsel was identified as Eugene Garey.

Dr. Kaplan spoke proudly of the "superior" X-ray machines; also of the quality of his own work. He said he had "nothing to conceal—never had and never will, and as far as I am concerned my records are open to anybody." He revealed that 40 to 50 per cent of his company's X-ray work was in compensation cases.

NEW YORK TIMES
APRIL 23-1943

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Mr. Stichman brought out that Dr. Kaplan had received a rating that permitted fees twice as high as those charged by other laboratories for work for mutual benefit groups and large companies.

Member Defends Action

Dr. Horace E. Ayers of 75 Central Park West, a member of the Industrial Council since July 1, 1935, and also a member of the County Medical Society, was questioned at length on the council's approval of Dr. Kaplan's application but steadfastly defended his action in voting for Dr. Kaplan. Three other doctors on the council opposed the application.

He was asked why he had favored the appointment of Dr. Kaplan despite "charges" contained in a letter from Dr. David J. Kaliski, chairman of the workmen's compensation board of the County Medical Society. He insisted there were "no charges, only innuendoes," and that he had acted on his own judgment of Dr. Kaplan's qualifications. Dr. Kaliski had said the society would not consider Dr. Kaplan until he submitted a "proper" application.

Dr. Kaliski when called to the stand was asked what was the "unethica lconduct" of Bendiner & Schlesingeer to which he referred in his letter to the Labor Department, objecting to Dr. Kaplan's association with the firm. His answer was that the company had given "rebates or commissions."

It was after the day's testimony that the Moreland Commissioners disclosed that they were investigating the entire field of referred X-ray work to see if the kick-back system in compensation cases was general.

"If it does exist generally," they said, "it will prove, what has already been indicated, that the minumum fee schedules for workmen's compensation X-ray work are too high and should be reduced for the benefit of the injured working people of the State."

They added that the high fees tended to perpetuate the kick-back system.

Dr. Leo S. Sacharoff of 277 Canal Street, one of the physicians mentioned in the investigation as having accepted kick-backs from X-ray laboratories, was suspended yesterday by the State Labor Department from compensation practice for refusing to testify in the department's inquiry into the charges. Appearing before Deputy State Industrial Commissioner Godfrey P. Schmidt, accompanied by Assemblyman Bernard Austin of Brooklyn, his counsel, Dr. Sacharoff denied Mr. Schmidt's authority to compel him to answer questions.

Wash Daily News

SCIENCE

4/14/43.

Pulp From Castor Bean Dangerous to Workers

By Science Service.

DETROIT—A new danger to the health of workers in an important war industry was disclosed before the meeting of the American Chemical Society here by two U. S. Deaprtment of Agriculture research men, Dr. Joseph R. Spies and Dr. E. J. Coulson.

This .industry is the extraction of castor oil, now needed in huge quantities for filling the recoil cylinders of heavy guns, supplying an essential ingredient for nylon, mixing with paints and otoher important uses.

But workers handling the pulp left after the oil has been extracted sometimes develop asthma and other allergic symptoms.

Castor bean pomace has long been known to contain pictin, a protein poison that rivals cobra venom in deadliness. But pomace extracts from which the last trace of ricin has been removed were still capable of causing allergic reactions. This newly discovered allergy-producing protein has not yet been given a name, but only a set of initials; CB-1A. Something closely resembling it in chemical and psysiological properties has also been isolated from cottonseed.

Curing chemicals absolved from blame in loss of vitamin B1 in meats.

Salt, saltpeter, sugar and other substances used in curing pork and other meats were absolved of blame for loss of thiamin (vitamin B1) under experimental conditions, in a report presented by Dr. D. A. Greenwood, Dr. B. W. Beadle and Dr. H. R. Kraybill of the American Meat Institute. In one set of experiments, they tested the comparative losses of synthetic vitamin when heated in water alone and when heated with the meat-curing chemicals. In a second set they made similar tests on vitamin losses from ground fresh lean pork. There was always some loss as a result of heating, but no more with the curing chemicals than without them.

WASHINGTON DAILY NEWS

APRIL 14-'43

NEW YORK TIMES

JULY 2 - 1943

WOMEN DON SLACKS AT BIG JERSEY PLANT

N. Y. Times —

Ford's Edgewater Factory Puts New Rule in Effect

7/2/43

Special to THE NEW YORK TIMES.

EDGEWATER, N. J., July 1—Complying with orders from the management, the 750 women employed on the assembly lines at the Ford Motor Company plant here reported for work this morning wearing slacks and safety shoes.

Dresses, open-toe shoes and high heels were banned in an order that Angus Harris, plant superintendent posted on bulletin boards throughout the factory several days ago to become effective today. It read:

"It is the express will of the management that women employes wear the following after July 1. Low heel shoes (no open toes or sandals) of the type known as safety shoes; and two-piece slack suits, preferably blue."

At Mr. Harris' office this morning it was said that except in a few cases in which suits had to be specially fitted, compliance had been almost 100 per ment. A few women had expressed the feeling that girls in the offices also be compelled to wear slacks, but the management was not going to risk a situation like that at the Highland Park plant in Detroit where the office girls staged a three-day devolt against such an order and had their own way in the end.

There also were a few objections here about buying safety shoes until the women were informed that no ration coupon was necessary for that type, which is specially constructed to protect the toes from falling objects.

"Everybody, the men included, seemed pleased with the change to slacks," it was said at the office.

WASHINGTON POST
JUNE 8 - 1943

Ford Office Girls Discard Slacks, Defy Dress Ban

Wash. Post 6-8-43

Detroit, June 7 (AP).—The office girls out at the Ford Motor Co.'s Highland Park plant didn't like what slacks did to their silhouettes, so they wore dresses to work today.

The company didn't go for the dress, so the girls sat idly in front of their typewriters.

Dresses, said a company spokesman, are dangerous—they might become entangled in machinery when the girls go out into the part of the factory where machines are located. So the company gave the girls no work to do, and the young ladies wouldn't go home.

Ben Garrison, president of the local U. A. W.-C. I. O. union, pleaded the girls' case. The company said they weren't fired, but only told to go home and put on some "decent clothes.

According to the Ford spokesman, a general rule exists that says all women workers must wear slacks. The union denied knowledge of any such agreement.

WOMEN IN WAR WORK GET NEW SKIN CREAMS

N.Y. Times

British Develop 'Barriers' to Prevent Dermatitis

7-6-43

War industry has stimulated the development in England of "barrier" creams and other substances for the prevention of dermatitis, particularly among women workers in chemical plants, according to the British correspondent of Chemical and Engineering News, publication of the American Chemical Society.

"Not only has the influx of large numbers of women workers into industry increased the demand for material of this type," it is pointed out, "but the shortage of rubber and rubber gloves has had a similar effect. Increased knowledge and growing importance of the maintenance of working efficiency have also helped to keep the problem before the public.

"Protective films which afford protection to the skin from materials immiscible with water, such as grease, paint, varnish, paraffin and solvents, can be easily applied and washed off, and provide protection for four or five hours.

"A special product of this kind incorporates a nonconducting loading factor with a tendency to reduce the heat of the skin, making it suitable for workers who are employed in high-temperature processes.

"The 'reconditioning' element comprises a saponified compound of cerostearates and a cholesterol absorption base, which serves as a repairing agent against moderate surface damage. For irritants and abrasives soluble in or miscible with water, a different series of products is available which takes longer to dry, but is eqaully easy to remove.

"Special products of this series are used against irritants of an acid or neutral character and for plating solutions, photographic chemicals and oil-in-water emulsions."

NEW YORK TIMES

JULY 6-'43

WASHINGTON POST
JULY 22-1943

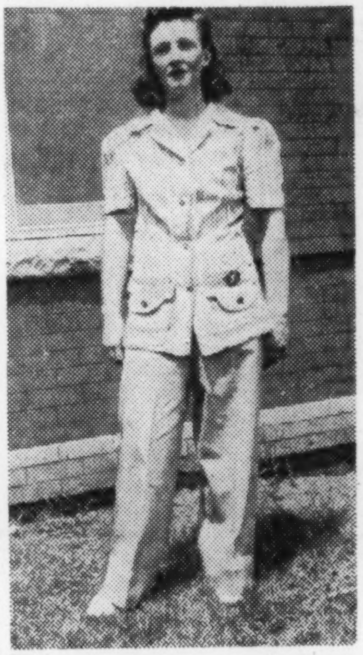
Second Dies of Bellevue Explosion Injuries

The death toll from the explosion of a powder fuse at Bellevue Naval Magazine Monday night was raised to two yesterday when Mrs. Mildred McDougall, 26, 489 N Street Southwest, died of injuries in Providence Hospital.

Homer B. Skidmore, 2 Neptune Green, Bellevue, was killed instantly by the blast, the second this yea rat the plant. Four other employes were injured, one seriously.

Funeral services for Mrs. McDougall, wife of Reginald D. McDougall, a coppersmith at the magazine, will be from Lee's funeral home, Fourth and Massachusetts Avenue Northeast, tomorrow at 2 p. m. She will be buried in Cedar Hill Cemetery.

Mrs. McDougall was the mother of two children, Randall, who is 8, and Reginald, 10. She and her husband were employed on the 4 p. m. to midnight shift at Bellevue. Other survivors are her mother, Mrs. Nettie Cowens; two brothers, Frank and John Cowens of Washington, and three sisters, Mrs. Ethel Culver of Arlington, Va.; Mrs. Nettie Alexander of Candler, N. C., and Mrs. Mabel Villena of Johnson City, Tenn.



MRS. MILDRED McDOUGALL

Mr. Skidmore and his wife and young daughter came to Washington from West Virginia about a year ago. He was 27.

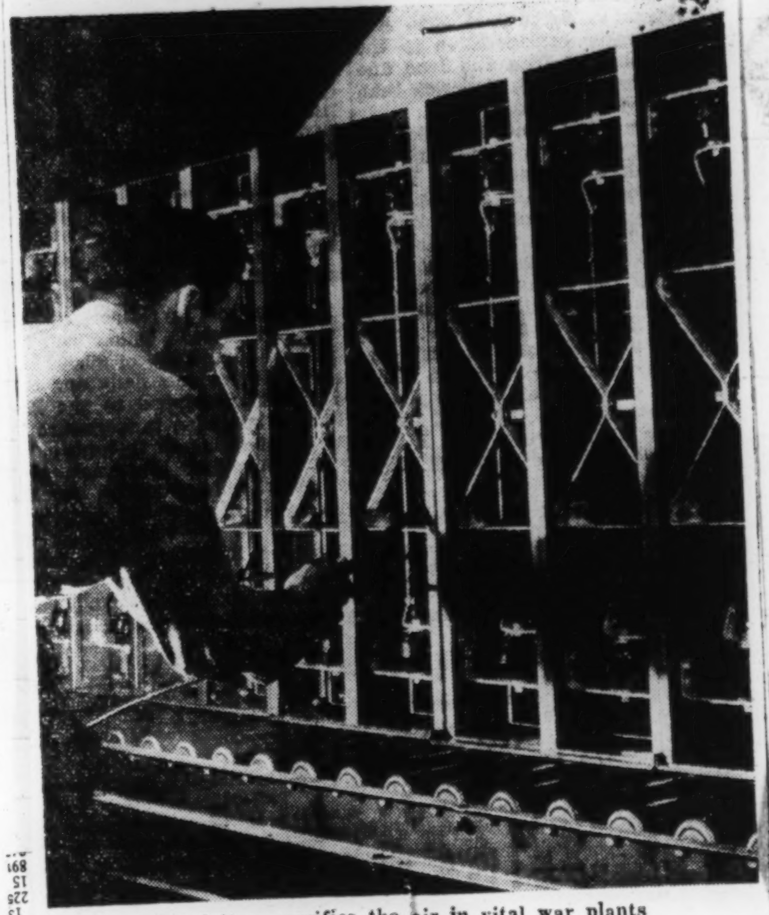
Taken to Providence Hospital, Nellie M. Sisk, 823 North Capitol Street, 33, a native Washingtonian, was reported to be improving yesterday, and had regained consciousness. She suffered head injuries.

Mrs. Sisk, the wife of James Sisk, an employe of the Railway Express Co., is the daughter of Julian Haag and the late Mrs. Haag, also of Washington. There are no children.

Three other injured employes were treated for shock following the blast and sent home. They were Miss Marion Parks, 302 Roosevelt Avenue, Seat Pleasant, Mr.; Mrs. Virginia C. Kerns, 467 H Street Southwest, and Miss Mabel Martin, 1024 Fourth Street Southeast.

A Navy board of inquiry was named yesterday to investigate the explosion and report to the Secretary of the Navy. In February three persons were killed at the magazine in an explosion.

ELECTRIC DEVICE PROTECTS PRECISION PARTS



Precipitron purifies the air in vital war plants

ELECTRIC SCREENS CLEAN FACTORY AIR

Elimination of Dust Essential in Certain War Work—Device Used in Plants Here

NYT — 7/18/43

By THOMAS P. SWIFT

By treating and cleaning factory air electrically, many important war plants in the metropolitan area are overcoming the menace of atmospheric dust to the bomb sights and other optical instruments that they manufacture, it was disclosed in a survey of such plants last week.

Since a single speck of dust in the optical system of a bomb sight might hide an enemy airdrome or other objective, the problem of maintaining air at its purest state is serious. In the entire New York area during the first three months of this year there was an average of 1.12 tons of dust particles in each cubic mile of air. In many factories, the dust density is much greater than the outdoors average.

To prevent these minute dust particles from impairing the efficiency of vital war instruments, war factories in Manhattan, the Bronx, Queens, Long Island and Northern New Jersey have installed electric air cleaners, called "precipitrons."

ELECTRICITY KEEPS FACTORY AIR CLEAN

EW YORK TIMES
ULY 18 - 1943

Continued From Page Seven

struments are produced, and in the Kollmorgen Optical Corporation's assembly rooms. Sperry also uses two precipitron units at its radio-tube research laboratory in Garden City, L. I.

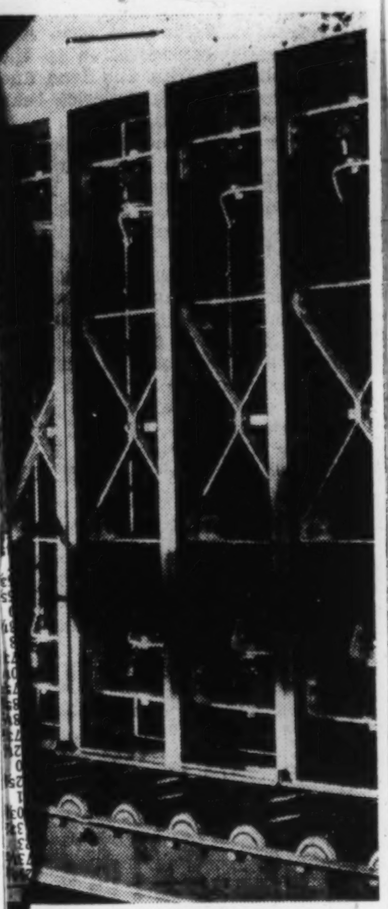
The Bakelite Corporation in Bound Brook, N. J., has installed ten precipitrons to prevent atmospheric fog from discoloring transparent and light colored plastic materials. Other war plants in this area using the electric air cleaners include the Aeroflex Laboratories in Long Island City and the Eclipse-Pioneer division of the Bendix Aviation Corporation at Teterboro, N. J. The Farrand Optical Company in the Bronx requires five air cleaners to wash electrically air in rooms where telescopic lenses are processed, and the Kollsman division of the Square D Company in Flushing uses them to protect the manufacture of precision optics and binoculars.

Other Uses Sought

To help speed war production and to improve the quality of munitions and military equipment, Westinghouse Electric research engineers are investigating still other uses for the precipitron, according to an official of the company. One of these is ridding factories of oil mists and welding fumes that impair lighting and cause accidents.

Although more than 150 precipitrons already have been installed in homes, development of a home unit for wide distribution necessarily has been postponed until after the war. It is possible, a Westinghouse official said, that home units may cost about as much as an electric refrigerator. In its operation, the precipitron shows no preference, removing from the air up to 95 per cent of all sizes of particles, including smoke, sand, pollen and even bacteria.

ELECTRIC DEVICE PROTECTS PRECISION PARTS



air in vital war plants

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Removes 95% of Particles

Developed a few years ago in the research laboratories of the Westinghouse Electric and Manufacturing Company, the precipitron has been perfected to the stage where it removes up to 95 per cent of all dirt particles from the air. Effective against smoke and noxious fumes as well, the electric air cleaner's smallest victims are particles of tobacco smoke which are so minute that 16,000 of them side by side would barely stretch across the head of a pin.

Air entering the precipitron—which is installed in a ventilating system—passes over fine tungsten wires charged with 13,000 volts of electricity, giving any dirt particles present a positive electrical charge. Behind the wires is a series of parallel steel plates, charged alternately with positive and negative electricity. Following the principle that unlike charges attract, the negative charge of the plates attracts the positively-charged dirt particles, thus removing them from the air stream. The plates are cleaned at regular intervals.

To help provide clean air for sealed rooms where bomb sights are produced, the Carl L. Norden Company in Manhattan uses precipitrons capable of supplying 117,000 cubic feet of "laundered" air every minute. The Barden Corporation in Connecticut, a Norden subsidiary, also uses an electric air cleaner and the manufacture of ball bearings for the bomb sights.

Other Users of Device

In Brooklyn, electric air cleaners are utilized effectively in the Sperry Gyroscope Company's testing room; at the Ordnance Instrument Company, where optical in-

Continued on Page Nine

ELECTRICITY KEEPS FACTORY AIR CLEAN

EW YORK TIMES

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WASHINGTON POST

MARCH 2 - 1943

Safety Outfits Banish Frills For Farm and Factory Jills

Wash. Post Mar. 2, 1943

By International News Service

Not trusting to Heaven to help the working girl, the Government last night designated that a foolproof, non-catching, non-ripping and non-snagging outfit must be worn by ladies on farm and assembly line.

Glamour girl and peek-a-boo bobs are to be confined to turban or cap. And the specified suit for all girls working around machinery will be innocent of puffs, frills, belts, flapping slacks, buttons and other distinguishing folderol.

The War Production Board cooperated immediately by freezing milady's coveralls within the specifications. The Maritime Commission carried the protective measures further by developing a Nation-wide policy in regard to its feminine shipyard workers.

A girl in a shipyard, the commission decreed, will have her crowning glory "confined under a bandanna and topped by a large hardshell safety hat." The commission further decreed that she must be dressed in a coverall garment "fitting close at the wrists and ankles with nothing, including buttons, collars, etc., to catch in whirring mechanism."

The director general of the WPB division for operations announed, meantime, that women's work clothes will be stripped of all nonessentials and frills. They will henceforth be made of either denim or a demin-type of cloth, gray sheeting, twill, gray print cloth or pin check.

Not only will the war woman wear a hair-covering turban or bandanna topped by a helmet but goggles with side-blinkers will keep her eyes intact—and undoubtedly on her work. For certain operations the conference recommended that the goggles be supplemented by a "face mask of cellulose acetate."

Lary welders will look even more protected in a flame-proofed coverall of the same dimensions or a two-piece outfit of wool trousers and shirt plus a regulation welder's leather set.

WAGE & HOUR DIVISION
1099 MAIN POST OFFICE BLDG.
CLEVELAND, OHIO

WD

Detroit Labor News

9-24-43

Women's Coveralls

In many defense plants, women find that ordinary slack suits or overalls are sufficient for protection and working comfort. But on some jobs, shirt tails, cuffs, pockets and loose belts are likely to be caught in machinery. Coveralls help eliminate this danger.

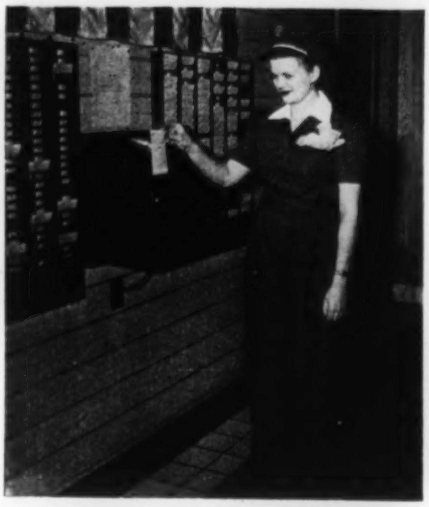
In shopping for womens coveralls, buy for utility—not beauty. Look for the following details:

¶ Fabric should be sturdy and closely woven. Denim, cotton twill or gabardine can withstand rough usage.

¶ Garments should be washable and should not shrink. Look for sanforized or preshrunk labels.

¶ Good workmanship includes ample crotch room, reinforced seams, flat pockets, extra fullness across the shoulders and bar tacking at points of strain.

Automotive War Prod.
Jan '43. P6



Clothing Styled for Women War Workers

Uniforms Serviceable As Well as Attractive

THOUGH SAFE and serviceable, shop uniforms for working women need not be unattractive. This fact is being demonstrated daily in a number of automotive plants in which standard uniforms have been adopted for women workers.

An example of styling shop clothing for safety without sacrifice of attractiveness is illustrated herewith. The young lady shown above is a machine operator in a factory devoted to the manufacture of aircraft cannon. A year ago this plant was a warehouse for the storage of repair and replacement parts for automotive farm machinery. Situated in a midwestern community containing relatively few trained mechanical workers, the plant was staffed with a score of supervisory workers who set up the necessary machinery and trained workers drawn from the neighborhood.

To get into production according to schedule it was necessary to hire and train many women. To guard these untrained women against unfamiliar shop hazards, the management devised the uniform portrayed here. The cap is equipped with hard and smooth top and visor to guard the wearer against the danger of getting hair entangled in machinery.

In this plant, where the proportion of women workers is now almost 50 per cent, the management reports that the uniforming of women seems to have had beneficial effect on the safety record.

Safety of Women in Industry Given Full Consideration

Star
4/19/43

By Joan Gardner

NEW YORK.—With the present army of four million women in industry expected to swell to double that size by the end of this war, their many problems were given full consideration at the convention of the Greater New York Safety Council in New York recently.

One of the most interesting discussions centered around the adaptation of women to war industries. Differences in temperament, physical abilities, attitude toward their work were among the complex questions discussed by Mr. D. I. Robinson, employment supervisor of the Sperry Gyroscope Co., a firm that admittedly expects to reach an all-time high of 80 per cent feminine employment. Because they work with small articles that require patience and manual dexterity, women are particularly well adaptd to industry today.

Mr. Robinson smashed many usual notions about the employment of women in factories. "The bogey of experience is highly overrated," he stated. Women must be adaptable to industrial discipline. His company prefers at least a high school education, but would as soon have a girl or woman without previous training. Office workers are sometimes given factory jobs, but former training is not considered necessarily valuable.

Girls too young are frequently not serious-minded enough about their jobs, and women too mature may be slow to absorb training, Mr. Robinson pointed out. Between these two extremes is a vast reservoir of woman power to draw upon. As to individual aptitudes, they are determined by personal interviews combined with aptitude tests, which have been carefully worked out to show manual dexterity and other requirements.

Next to ability, the attitude of the individual to the job is of great importance, Mr. Robinson stressed. Some women want the publicity or social esteem that comes with holding a defense position. Others are inspired by patriotic motives. It is important to determine the motive behind the jobseeker and her ability to get along with people before time and money are spent on her training.

Compared to men, Mr. Robinson evaluates the physical efficiency of women in the following manner: They have 90 per cent of the stature, 80 per cent of the weight and 55 per cent of the strength. On the majority of jobs, these deficiencies are more than compensated by patience, dexterity, the ability to follow instructions and training, as well as a real desire to do a good job.

On the "frothy" side, the meeting considered work clothes. A fashion review of those actually worn in war production plants was presented by Miss Mary E. Horgan of the American Mutual Liability Insurance Co. According to her findings, 50 per cent of women workers choose coveralls. The other half is divided between slacks and overalls.

She finds that women want to dress attractively even on the dirtiest jobs, and that often the presence of women makes the men spruce up, too. She favors the wearing of a uniform, which she believes brings a spirit of teamwork into the plant, eliminates envy and competition, besides being practical.

In addition to uniforms for every conceivable job, Miss Horgan showed safety shoes, headgear, goggles and specialized accessories for such jobs as welding, riveting, inspecting and so on. These were contributed from many sources, from such top-flight millinery designers as Dache and John Fredericks, to the optical companies who make the goggles and eye protectors.

The whole matter of safety has been brought to the fore—not only on the assembly line in industrial plants, but also on the street, particularly where dimout regulations require that lights at night be drastically lessened.

At a luncheon at the Plaza, Bonwit-Teller climaxed the presentation of high-style spring and summer fashions with dimout styles for after dark. The cloth which is being used to make them is the same as that used by the Government on boats traveling in blackouts. They need the glowing fabric to mark their companionways, ladders, switches, etc. As such, it is available in limited quantities to the public, but is being used as belts on coats, to edge hoods on raincoats, for bags, hats, flowers, shoe buckles and even dog collars and leashes. The new fabric is a white acetate rayon, coated with luminous pigments that have a calcium base and are then lacquered and waterproofed. The pigments absorb light, either electric or daylight, and cast this light off in darkness. The fabric may be seen at a distance of 75 feet.

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3 STYLES OF UNIFORMS AVAILABLE FOR WOMEN

Consolidated Liberator
2/13/43

Uniforms bearing the official Consolidated insigna will be more prevalent throughout the plant hereafter as all women employes working in the factory either full time, or only now and then, begin conforming to new company regulations.

There is a choice of three styles, also three kinds of material. Samples are exhibited on the east side of the east hangar near the north end. Light denim in light blue, a heavier denim in dark blue an a rayon poplin in dark blue are available. The denims are available in long or short sleeves. Prices are $4.59, $5.50 and $8.95. The uniforms can be purchased at Tucson department stores.

THE SUNDAY STAR, WASHINGTON, D. C., FEBRUARY 21, 1943.

Special WOW Red Bandanna Approved by War Department

By the Associated Press.

The new washable WOW bandanna—of Army ordnance red—has been approved by the War Department.

It now can be manufactured, admired and worn, complete with flame and shell design.

But bear in mind that if it's made with a border, that border must be on the edges. None of this business of putting the border in the middle. That's the ruling.

Now a WOW is a woman ordnance worker, and a bandanna is a handkerchief, according to Webster. (According to the War Department, it's a headgear, but that's beside the point and just goes to show it's a free country.) Anyhow, whether the WOW wears the WOW bandanna is optional, but if she does . . . wow!

The design, as approved by the Secretary of War, was outlined in an order filed four days ago in the Federal register division of the National Archives—probably the only place in town where anything that hot could have hidden so long.

It all came out yesterday—all about how "the background color of the WOW bandanna shall be Army ordnance red or as near that shade as possible," and how it may be made with or without a border, but if it has one "the border shall be white, and this border shall occur at the edges."

What occurs between the borders is something else—from 95 to 115 white Army ordnance shell-and-flame insignias, "scattered or tossed about" without "following any regular arrangment," for each square yard of cloth.

An optional color scheme for summertime also was authorized, which permits a background of white with insignia and border (which still must occur at the edges) of Army ordnance red.

The finished bandanna must be

Mrs. Paul V. McNutt (center), wife of the War Manpower chief, and Mrs. Mary Brewster White (right), woman's campaign manager of the War Manpower Commission, chat with Marshall Adams at a luncheon meeting of the Washington Fashion Group. Miss Adams is regional director of Fashion Group.
—Star Staff Photo.

Fashion in Workers' Garb Seen as Aid to War Effort

A clothes, accessory and beauty campaign may be one part of the Government's effort to make women "work-minded," Mrs. Mary Brewster White, women's campaign manager of the War Manpower Commission, revealed yesterday.

Addressing the Fashion Group, Inc., at a luncheon meeting at the Statler Hotel, Mrs. White pointed out that 18 million women must be at work before the end of 1943 if war production quotas are to be maintained and essential civilian structure supported.

"If 18 million must work (and indeed, they must)," she said, "our first job is to make their working an entirely normal procedure under a wartime economy." Bearing this point in mind, she continued, her organization, as a part of a comprehensive educational campaign, hopes to appeal to women "through one of their most natural media—clothes."

Stylish Work Clothes.

Enlisting the aid of the fashion experts, she suggested "the merchandising of clothes, accessories, beauty preparations might be applied to women at work rather than to the glamour girl of yesterday.

"Let us not, however, set a single standard of dress nor promote any regimented costume or fashion extravaganza," she urged. "But in the interests of efficiency and safety on the job—no matter what job—you may have to sell women on the smartness and rightness of being at work.

"We would like to promote work clothes to the place of style and prestige they deserve. It is a noble thing for women to work. Why, therefore, smother them in shapeless little smocks, pop them into 'little horrors'? Let us instead give them something inspiring to work in."

Mrs. White emphasized that women will be needed in necessary civilian services as well as factory jobs. In fact, she pointed out, War Manpower Chief Paul V. McNutt has stated that two out of three women needed will be placed in civilian jobs.

"Fashion as a War Weapon" also was discussed by Miss Ruth West, retail consultant of the bureau of campaigns of the Office of War Information.

"Fashion of Frugality."

The "fashion of frugality" was one of the "war fashions" which the Nation's 36,000,000 women must learn to adopt quickly because they realize the need for these measures, Miss West said.

Others included the "fashion for gardening," the "fashion for carrying packages," the "fashion of walking" and the "fashion of taking a war job."

About 60 members and guests attended the luncheon, which was the first held by the Fashion Group at the Statler Hotel, which is to be its permanent headquarters. Marshall Adams, regional president, presided.

Guests included Mrs. McNutt, wife of the War Manpower chief; Mrs. Warren Austin and Mrs. Claude Pepper.

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Goodwill Guild To Meet Tomorro

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Soroptimists Hear WAVES, WAACS And SPARS

Increasing needs of the WAVES and the WAACS with the expanding recruiting programs of the two services were discussed by women recruiting officers yesterday at a luncheon meeting of the Soroptimist Club.

Speaking for the WAVES, Lt. (j. g.) Leila Stevens said that the Navy is particularly interested in securing women with training in electrical engineering.

Lt. Barbara Smith of the WAACS told of the Army program which plans to recruit women for ground work at air training centers.

The speaker for the SPARS, Ensign Mary C. Lyne, felt particularly at home with the Soroptimists, being a former member of the Venture Club, the junior service women's club sponsored by the Soroptimist Club. She is a sister of Elinor Lee, one of the club members. Miss Lyne was among the first 13 girls to attend the Coast Guard Training School at New Haven, Conn.

The program included a group of songs by Joyce Ramero accompanied by Mrs. Jewel Downs. Miss Mildred Clum, the president, presided. Miss Rae Epstein was in charge of the program.

entered

DAR Broadcast

Mrs. Samuel James Campbell, treasurer general of the National Society, Daughters of the American Revolution, will speak on a radio program sponsored by the District DAR this afternoon over Station WJSV. Mrs. Campbell is a candidate for the office of president general of the DAR in the next elections.

The District DAR will present Mrs. Louise Moseley Heaton, national president of the Children of the American Revolution, at 9:45 a.m. Saturday over Station WOL.

CHILD'S COLDS
Relieve misery direct —without "dosing."
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Goodwill Guild To Meet Tomorro

The annual business
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Store Hours 9:30 A.M.
Set his heart awhirl w
Bag sets . . . in Moro
Fabrics! Sketched is
and so captivating!

Store Hours 9:30 A

SAFETY - 1944

For release
June 14, 1944

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

Unless existing supplies of flexible supporting garments can be made to last until more rubber is available to the corset industry, war production and essential civilian industries will suffer through lowered efficiency or even loss of many women workers, Mary Anderson, Director of the Women's Bureau, U. S. Department of Labor, pointed out in a statement today.

"Women who have been accustomed to wear corsets, girdles and other supporting garments in normal times can not get along without them in war jobs which demand increased physical exertion," Miss Anderson said. "Into this category fall many jobs women are now performing in aircraft and munition plants, steel mills and foundries, in shipyards and railroad work, on buses and street cars.

"It is vitally important to the success of the war effort that women be kept in their jobs. Nevertheless, in many war plants women workers are leaving almost as fast as new ones are being hired. For every 79 women who took jobs in a representative group of war-producing industries in January, 1944, 77 left their jobs. Aircraft production lost 78 women for every 58 hired.

"Fatigue is one of the most usual causes of women's quitting their jobs. It is a well-known fact that good posture helps to prevent fatigue, and one of the most effective means for mature and older women achieving healthful posture is to wear the right kind of supporting garments. These women can not grow their own muscular girdles.

"Mature and older women form an unusually large part of the woman labor force today. It has been estimated that in the present war period 21 per cent of the women workers are 35 to 45 years old, another 21 per cent are 45 to 65 years, while 56 per cent are under 35.

"Women of 35 and over are especially susceptible to fatigue. In the first place many of them have home responsibilities which are equivalent to a second job. Then many of these women never worked under factory schedules and conditions before they took their war jobs. They are not muscularly hardened. They come from homes and offices in which labor-saving machines and appliances do all the heavy work. Standing or sitting at a machine all day, continuous bending, reaching, and lifting are new and very tiring kinds of work to these women. If they can not stand the strain and fatigue of the job, they quit work.

"Because flexible garments are and will be needed by such women it is imperative that every precaution be taken to make existing supplies of such garments last as long as possible. The present need far exceeds existing supplies.

"The flexibility of modern corsets which makes them a help to active women depends on rubber. Since no new supplies of crude rubber

are available and synthetic rubber is supplying less than 10 per cent of the normal requirements of the corset industry, the situation is critical.

"Every woman, war worker or not, who owns a rubber-containing garment owes it to the war effort to take good care of it and no woman should buy a new one unless she really needs it to get her work done."

Following are suggestions for conserving supporting garments containing rubber as outlined by corsetry experts:

(1) Don't buy a girdle or corset over the counter. Have every new garment fitted and have it refitted if it begins to lose its shape.

(2) Keep every garment clean - wash frequently in tepid suds made with mild soap. Rinse thoroughly. Do not wring or twist. Dry away from direct heat or sunlight.

(3) Do not use an iron on elastic sections as heat ruins rubber.

(4) If you own more than one, wear each alternately. Rubber needs both exercise and rest to keep it alive.

(5) Have minor repairs made promptly, because small damage can quickly grow into major disaster to supporting garments. Never repair a broken garter with a safety pin.

(6) Handle the garments carefully. Don't yank them on or off. Be especially careful not to let fingernails push into elastic fabric sections; holes in these fabrics are hard to repair.

(7) Try harder than ever before to make a habit of good posture, which will prevent unnecessary strain on your supporting garments.

For immediate release

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

June 1944

WOMEN AT WORK
Special Feature Service

Mary Anderson, Director, Women's Bureau, U. S. Department of Labor

NEED FOR SUPPORTING GARMENTS

Those concerned with problems of women workers in industry today are generally aware that rubber-containing corsets and girdles are hard to find. Because many women, especially older ones, need the support of such garments to prevent harmful strain and fatigue, this shortage becomes a hazard to efficient production.

Women's counselors and health directors of some plants have arranged that workers get unofficial priorities on flexible supporting garments in the stores. Corset buyers are quick to realize that women who must stand or sit all day at a machine need the help of supporting garments more than women who, when they begin to get tired, can either take time out to rest or can relax strained muscles by shifting to another type of work. Plant pass cards or buttons easily identify women workers when they go to corset departments. Some corset manufacturers increase supply quotas of stores which establish hardship based on increased demand from war workers.

Workers who go to corset departments under arrangements made by plant management should be advised to have the garment they purchase fitted carefully - not to try to buy over the counter. A garment which does not fit will not give satisfactory support and will wear out more quickly than one which is right at every point. No woman should leave the store with a rubber-containing garment until the corsetiere has approved its fit. This practice will prevent wasting garments which contain irreplaceable materials.

It is reported that women's counselors of some plants have sought to solve the shortage problem by buying up supplies of rubber-containing supporting garments for their women workers. Because the fitting of such garments should be supervised by an experienced corsetiere, and because supplies are short, it is better practice to send women workers to the stores for their corsets, brassieres, etc. There are many types of figure to be fitted, and leaving the garments in the stores assures a wider variety of types and sizes of garment from which the corsetiere can select the best type available for each woman. Under the present circumstances, it would be most unfortunate if the usefulness of any rubber-containing supporting garments were forfeited because they happened not to fit any of the women in one plant. Every flexible garment available now and for the next few months is so valuable that it should not be taken out of retail stock except by a woman whose back and abdomen or breasts it will fit and support properly.

(over)

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For immediate
release

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

June
1944

WOMEN AT WORK
Special Feature Service

Mary Anderson, Director, Women's Bureau, U. S. Department of Labor

NEED FOR SUPPORTING GARMENTS

Those concerned with problems of women workers in industry today are generally aware that rubber-containing corsets and girdles are hard to find. Because many women, especially older ones, need the support of such garments to prevent harmful strain and fatigue, this shortage becomes a hazard to efficient production.

Women's counselors and health directors of some plants have arranged that workers get unofficial priorities on flexible supporting garments in the stores. Corset buyers are quick to realize that women who must stand or sit all day at a machine need the help of supporting garments more than women who, when they begin to get tired, can either take time out to rest or can relax strained muscles by shifting to another type of work. Plant pass cards or buttons easily identify women workers when they go to corset departments. Some corset manufacturers increase supply quotas of stores which establish hardship based on increased demand from war workers.

Workers who go to corset departments under arrangements made by plant management should be advised to have the garment they purchase fitted carefully - not to try to buy over the counter. A garment which does not fit will not give satisfactory support and will wear out more quickly than one which is right at every point. No woman should leave the store with a rubber-containing garment until the corsetiere has approved its fit. This practice will prevent wasting garments which contain irreplaceable materials.

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"Women who have been accustomed to wear corsets, girdles and other supporting garments in normal times can not get along without them in war jobs which demand increased physical exertion," Miss Anderson said. "Into this category fall many jobs women are now performing in aircraft and munition plants, steel mills and foundries, in shipyards and railroad work, on buses and street cars.

"It is vitally important to the success of the war effort that women be kept in their jobs. Nevertheless, in many war plants women workers are leaving almost as fast as new ones are being hired. For every 79 women who took jobs in a representative group of war-producing industries in January, 1944, 77 left their jobs. Aircraft production lost 78 women for every 58 hired.

"Fatigue is one of the most usual causes of women's quitting their jobs. It is a well-known fact that good posture helps to prevent fatigue, and one of the most effective means for mature and older women achieving healthful posture is to wear the right kind of supporting garments. These women can not grow their own muscular girdles.

"Mature and older women form an unusually large part of the woman labor force today. It has been estimated that in the present war period 21 per cent of the women workers are 35 to 45 years old, another 21 per cent are 45 to 65 years, while 56 per cent are under 35.

"Women of 35 and over are especially susceptible to fatigue. In the first place many of them have home responsibilities which are equivalent to a second job. Then many of these women never worked under factory schedules and conditions before they took their war jobs. They are not muscularly hardened. They come from homes and offices in which labor-saving machines and appliances do all the heavy work. Standing or sitting at a machine all day, continuous bending, reaching, and lifting are new and very tiring kinds of work to these women. If they can not stand the strain and fatigue of the job, they quit work.

"Because flexible garments are and will be needed by such women it is imperative that every precaution be taken to make existing supplies of such garments last as long as possible. The present need far exceeds existing supplies.

"The flexibility of modern corsets which makes them a help to active women depends on rubber. Since no new supplies of crude rubber

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Following are suggestions for conserving supporting garments containing rubber as outlined by corsetry experts:

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"Women who have been accustomed to wear corsets, girdles and other supporting garments in normal times can not get along without them in war jobs which demand increased physical exertion," Miss Anderson said. "Into this category fall many jobs women are now performing in aircraft and munition plants, steel mills and foundries, in shipyards and railroad work, on buses and street cars.

"It is vitally important to the success of the war effort that women be kept in their jobs. Nevertheless, in many war plants women workers are leaving almost as fast as new ones are being hired. For every 79 women who took jobs in a representative group of war-producing industries in January, 1944, 77 left their jobs. Aircraft production lost 78 women for every 58 hired.

"Fatigue is one of the most usual causes of women's quitting their jobs. It is a well-known fact that good posture helps to prevent fatigue, and one of the most effective means for mature and older women achieving healthful posture is to wear the right kind of supporting garments. These women can not grow their own muscular girdles.

"Mature and older women form an unusually large part of the woman labor force today. It has been estimated that in the present war period 21 per cent of the women workers are 35 to 45 years old, another 21 per cent are 45 to 65 years, while 56 per cent are under 35.

"Women of 35 and over are especially susceptible to fatigue. In the first place many of them have home responsibilities which are equivalent to a second job. Then many of these women never worked under factory schedules and conditions before they took their war jobs. They are not muscularly hardened. They come from homes and offices in which labor-saving machines and appliances do all the heavy work. Standing or sitting at a machine all day, continuous bending, reaching, and lifting are new and very tiring kinds of work to these women. If they can not stand the strain and fatigue of the job, they quit work.

"Because flexible garments are and will be needed by such women it is imperative that every precaution be taken to make existing supplies of such garments last as long as possible. The present need far exceeds existing supplies.

"The flexibility of modern corsets which makes them a help to active women depends on rubber. Since no new supplies of crude rubber

are available and synthetic rubber is supplying less than 10 per cent of the normal requirements of the corset industry, the situation is critical.

"Every woman, war worker or not, who owns a rubber-containing garment owes it to the war effort to take good care of it and no woman should buy a new one unless she really needs it to get her work done."

Following are suggestions for conserving supporting garments containing rubber as outlined by corsetry experts:

(1) Don't buy a girdle or corset over the counter. Have every new garment fitted and have it refitted if it begins to lose its shape.

(2) Keep every garment clean - wash frequently in tepid suds made with mild soap. Rinse thoroughly. Do not wring or twist. Dry away from direct heat or sunlight.

(3) Do not use an iron on elastic sections as heat ruins rubber.

(4) If you own more than one, wear each alternately. Rubber needs both exercise and rest to keep it alive.

(5) Have minor repairs made promptly, because small damage can quickly grow into major disaster to supporting garments. Never repair a broken garter with a safety pin.

(6) Handle the garments carefully. Don't yank them on or off. Be especially careful not to let fingernails push into elastic fabric sections; holes in these fabrics are hard to repair.

(7) Try harder than ever before to make a habit of good posture, which will prevent unnecessary strain on your supporting garments.

For release
June 14, 1944

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

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Miss Robinson's copy

June 29, 1944

Mr. David King Rothstein, Economist
National War Labor Board, Region II
220 East 42 Street
New York 17, New York

Dear Mr. Rothstein:

In response to your letter of June 22, we are sending herewith our special bulletin on safe clothing for women workers.

We do not have a list of firms using safety clothing, but we do know there are many who have established safety clothing standards for their women workers. These standards vary from a required specific uniform, such as is used in the Sperry Gyroscope Company plant on Long Island and in the Curtiss-Wright plants in New Jersey, to the wearing of slacks or cover-alls, with no specification as to style or type.

If you particularly wish to obtain names of companies who are requiring specific types of uniforms, you may be able to get them from the manufacturers in New York, or perhaps from Sears Roebuck or Montgomery Ward Company, who sell many of them, or from Macy's or other large firms in New York who supply them.

The Women's Bureau believes that uniforms, per se, are not necessary for safety, but that the specific demands of the job should determine the type of clothing. For example, the use of caps near moving machinery that may catch loose hair, the use of slacks without too wide cuffs where loose clothing is a danger, and proper footwear should be requirements set by the nature of the work.

The American Standards Association has issued a set of standards for women's work clothing, indicating the specifications for various types of wearing apparel. These standards can be obtained from the Association's offices at 29 East 39th Street, New York 18, New York.

Yours sincerely,

Mary Anderson, Director

JM/ml

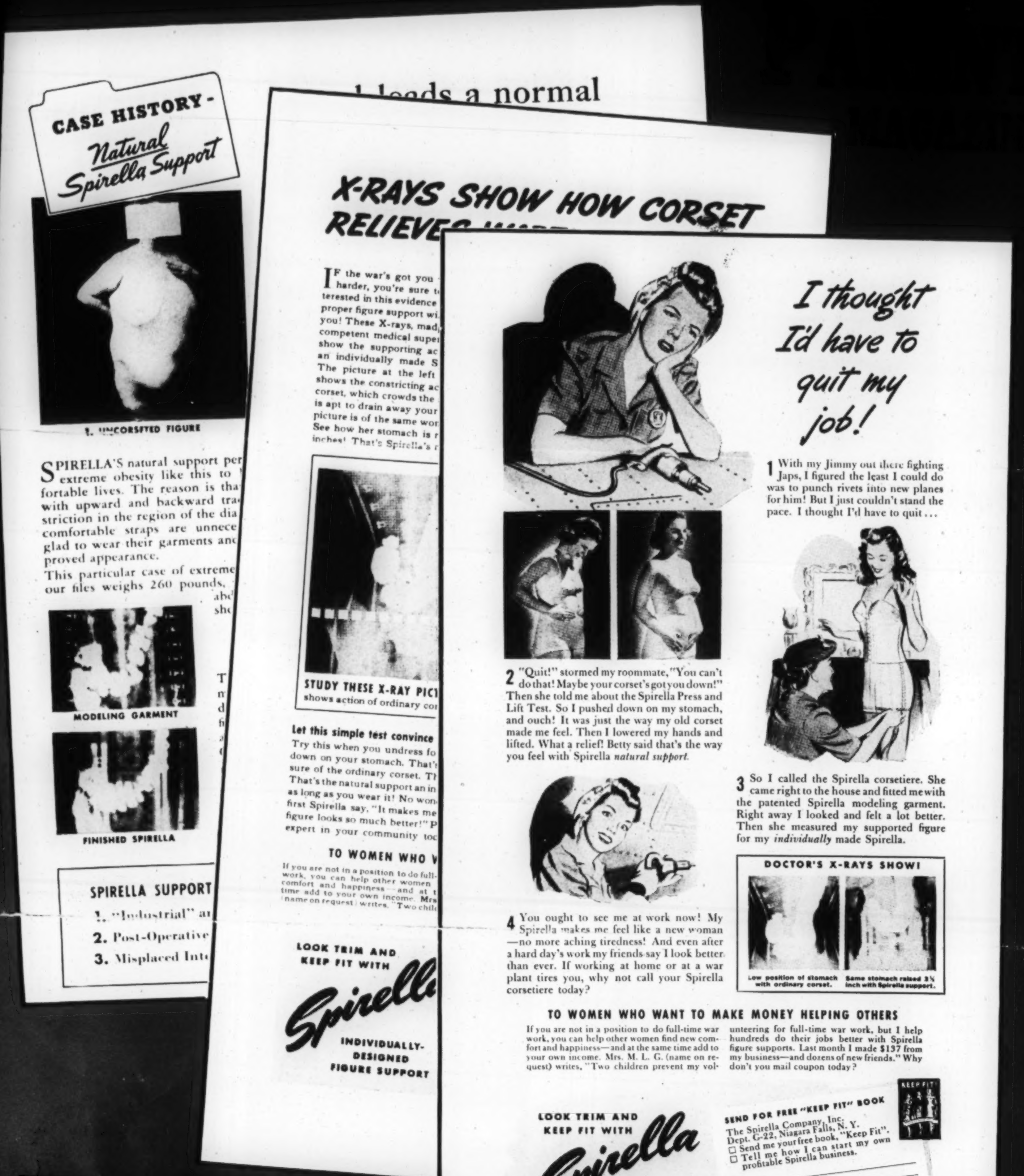
PARENTS

MAGA IN

On Rearing Children from Crib to College
with Special Sections on

THE FAMILY HOME
FEEDING THE FAMILY
FAMILY FASHIONS
FAMILY FUN

More Than 700,000 Paid Circulation
APRIL 1944 25¢



l leads a normal

CASE HISTORY - Natural Spirella Support

1. UNCORSETED FIGURE

SPIRELLA'S natural support per
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fortable lives. The reason is tha
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glad to wear their garments anc
proved appearance.

This particular case of extreme
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MODELING GARMENT

FINISHED SPIRELLA

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SPIRELLA SUPPORT

1. "Industrial" ar
2. Post-Operative
3. Misplaced Int

X-RAYS SHOW HOW CORSET RELIEVES

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an individually made S
The picture at the left
shows the constricting ac
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is apt to drain away your
picture is of the same wor
See how her stomach is r
inches! That's Spirella's r

STUDY THESE X-RAY PICT
shows action of ordinary cor

Let this simple test convince

Try this when you undress fo
down on your stomach. That'
sure of the ordinary corset. Th
That's the natural support an in
as long as you wear it! No won
first Spirella say, "It makes me
figure looks so much better!" P
expert in your community toc

TO WOMEN WHO W

If you are not in a position to do full-
work, you can help other women
comfort and happiness—and at t
time add to your own income. Mrs
(name on request) writes, "Two chil

LOOK TRIM AND KEEP FIT WITH

Spirella

INDIVIDUALLY-DESIGNED FIGURE SUPPORT

I thought I'd have to quit my job!

1 With my Jimmy out there fighting Japs, I figured the least I could do was to punch rivets into new planes for him! But I just couldn't stand the pace. I thought I'd have to quit...

2 "Quit!" stormed my roommate, "You can't do that! Maybe your corset's got you down!" Then she told me about the Spirella Press and Lift Test. So I pushed down on my stomach, and ouch! It was just the way my old corset made me feel. Then I lowered my hands and lifted. What a relief! Betty said that's the way you feel with Spirella *natural support*.

3 So I called the Spirella corsetiere. She came right to the house and fitted me with the patented Spirella modeling garment. Right away I looked and felt a lot better. Then she measured my supported figure for my *individually* made Spirella.

DOCTOR'S X-RAYS SHOW!

Low position of stomach with ordinary corset.

Same stomach raised 3½ inch with Spirella support.

4 You ought to see me at work now! My Spirella makes me feel like a new woman—no more aching tiredness! And even after a hard day's work my friends say I look better than ever. If working at home or at a war plant tires you, why not call your Spirella corsetiere today?

TO WOMEN WHO WANT TO MAKE MONEY HELPING OTHERS

If you are not in a position to do full-time war work, you can help other women find new comfort and happiness—and at the same time add to your own income. Mrs. M. L. G. (name on request) writes, "Two children prevent my volunteering for full-time war work, but I help hundreds do their jobs better with Spirella figure supports. Last month I made $137 from my business—and dozens of new friends." Why don't you mail coupon today?

LOOK TRIM AND KEEP FIT WITH

Spirella

INDIVIDUALLY-DESIGNED FIGURE SUPPORT

SEND FOR FREE "KEEP FIT" BOOK

The Spirella Company, Inc.
Dept. G-22, Niagara Falls, N. Y.
☐ Send me your free book, "Keep Fit".
☐ Tell me how I can start my own profitable Spirella business.

Name
Address State
City

In Canada, write The Spirella Co., Niagara Falls, Ont.

KEEP FIT!

THROUGH MEDICAL JOURNALS AND WOMEN'S MAGAZINES

SPIRELLA IS HELPING AMERICAN WOMEN TO KEEP FIT!

AND AMERICA'S OTHER MOST

RESPECTED MAGAZINES ADVERTISE SPIRELLA

JOURNAL
PARENTS' MAGAZINE
Good Housekeeping
THE HEALTH MAGAZINE
HYGEIA

PARENTS' MAGAZINE, GOOD HOUSEKEEPING, LADIES' HOME JOURNAL and HYGEIA carefully check the claims a manufacturer makes, before the advertising is accepted. That's why Spirella advertising in these publications, such as shown on the opposite page, has convinced so many thousands of women of Spirella's superiorities.

ACCEPTED FOR ADVERTISING BY LEADING MEDICAL JOURNALS

THE JOURNAL
American Medical Association
The American
JOURNAL OF
NURSING
R.N.
JOURNAL FOR NURSES

The Journals of The American Medical Association, R.N., and The American Journal of Nursing, both nurses publications, all accept Spirella Advertising after careful examination of the product and its beneficial effects on wearers. When you buy a product as important as a Supporting Garment, you, too, should examine all the facts carefully and be certain you get the healthful support, comfort and attractive appearance these active times demand.

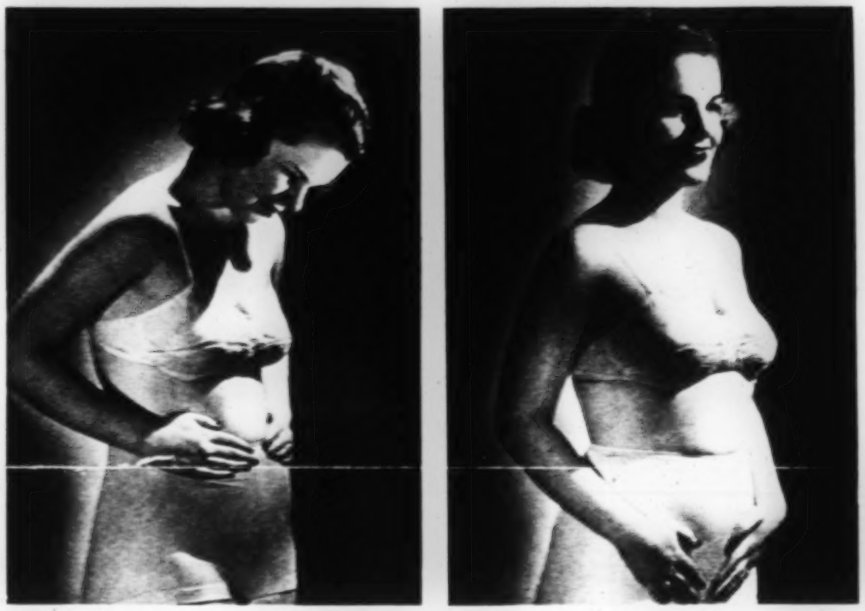
ENDORSED BY FOREMOST SERVICE BUREAUS

Spirella proudly bears the Seals of the World's leading service bureaus! The Royal Institute of Public Health and Hygiene has awarded Spirella its Certificate of Merit, and says in part - - "... no constriction nor pressure upon the organs ... The Spirella Company is to be commended not only for the excellence of its garments, but also for its efforts to see that designs are intelligently supplied to wearers, and that the wearers use them properly after purchase." The Service Bureaus of Parents' Magazine and Good Housekeeping have also given Spirella the commendation and guarantee shown here.

Royal Institute of Public Health & Hygiene
This is to Certify that
REPLACEMENT OR REFUND OF MONEY
Guaranteed by Good Housekeeping
IF DEFECTIVE OR NOT AS ADVERTISED THEREIN
STUDIED AND
COMMENDED
PARENTS' MAGAZINE
CONSUMER SERVICE BUREAU

WITH THIS INTERESTING TEST

you can prove Spirella's advantages for yourself

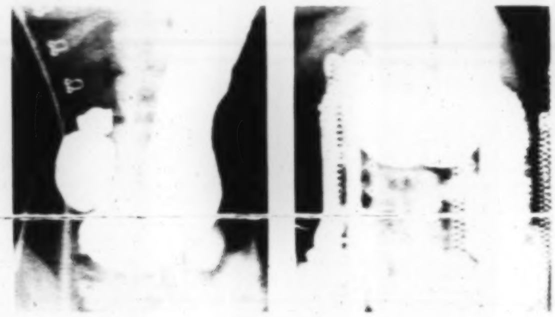


TRY THIS SIMPLE "PRESS AND LIFT" TEST

Make this simple test and feel the difference between natural Spirella support and ordinary constricting corsets. First, put your hands at waist and press down. That's the cramping, crowding pressure ordinary corsets exert on the stomach and other internal organs. It's easy to understand how it can ruin your figure and injure your health. Now lower your hands and lift up. That's the comfortable support nature intended you to have — the kind you'll get from your individually designed Spirella as long as you wear it.

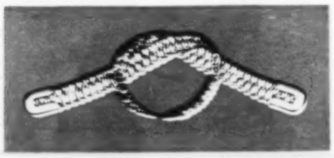
THE PATENTED SPIRELLA MODELING GARMENT

By taking measurements after the figure has been naturally supported with the Patented Modeling Garment, guesswork is avoided. The Corsetiere adjusts this garment to your individual figure, giving you just the right amount of support your figure needs. Then she measures your improved figure over the Modeling Garment - and at the factory your Spirella can be cut, sewn and finished to these exact measurements. This insures a perfect fit, with just the right natural support. Your Spirella will make you look and feel ten years younger!



X-Ray Proof!

These photographs were taken by competent physicians. Photograph at the left shows a woman wearing an ordinary constricting corset. Notice stomach is crowded down — threatening health and comfort. Picture at the right shows same woman in her Spirella. Stomach is raised about three inches — natural comfortable beautiful support.



PATENTED STAY

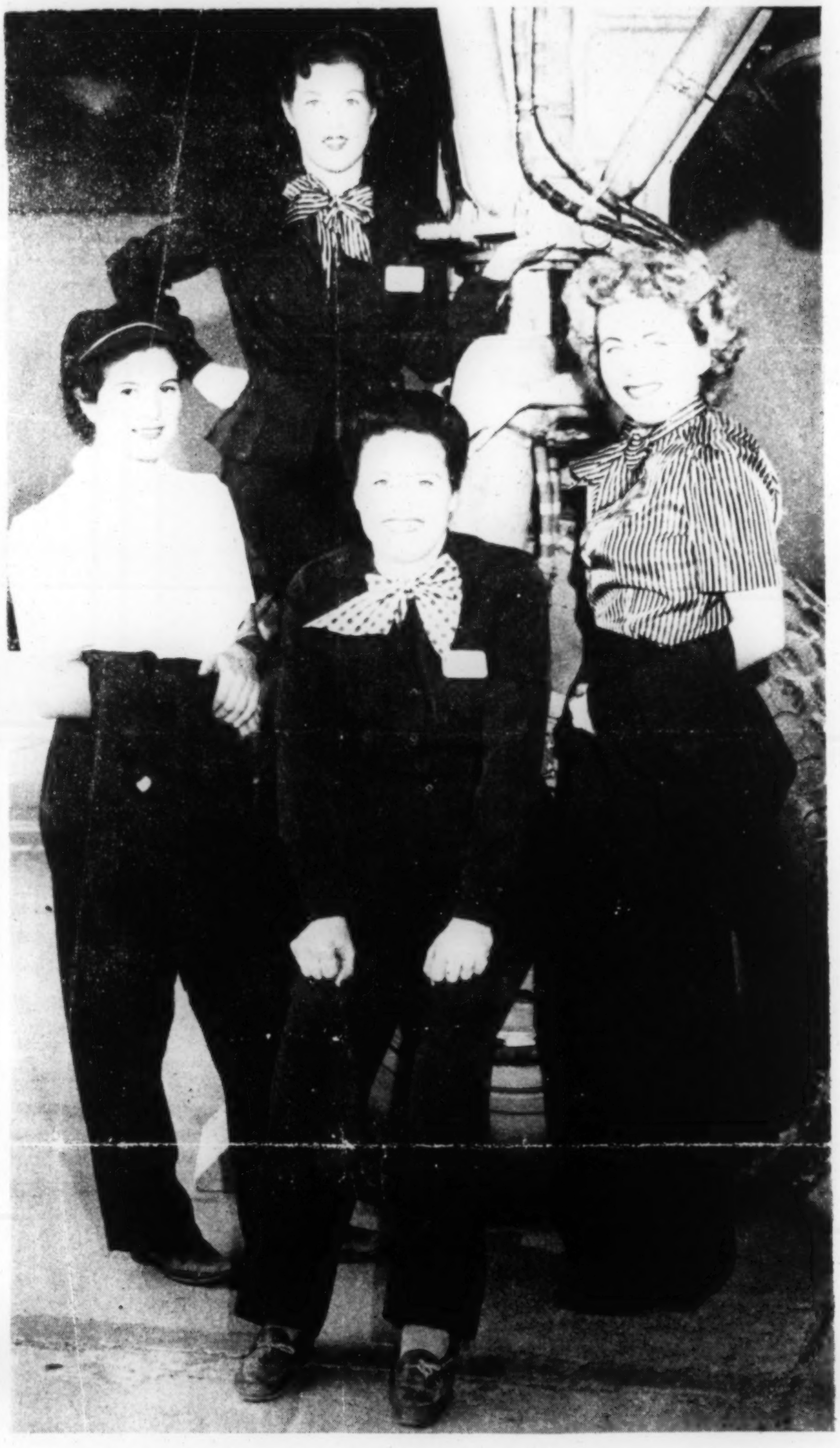
This flexible stay used exclusively by Spirella means added comfort and freedom.

LOOK TRIM AND KEEP FIT WITH

Spirella

INDIVIDUALLY DESIGNED FIGURE SUPPORT

"THE HEALTH CRUSADE -- A HOME-FRONT AID"



WANNA BUY A UNIFORM? You probably do, gentlemen, after looking over the above Convair models, bedecked in those new company purchased uniforms now available to all women employes. The attractive quartet above agreed to give 'em a try which proved very successful, indeed. They are, Virginia Coe (194) left, Martha Thompson (132) rear, Barbara Martin (101) right, and Evelyn Benton (130) front. The background is a B-24 in case you hadn't noticed.

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NEW WOMEN'S UNIFORMS CAN NOW BE BOUGHT AT TOOL CRIB

New women's slack suit uniforms, which the company has purchased and is offering all employes at cost, plus shipping charges, are now available at the main tool crib, between No. 1 and 2 hangars.

The regular safety slack suit in dark blue sells at $5.80 and blue safety slacks at $3.45. Khaki fatigue slacks, tailored so that the bottoms can be tightened about the legs a la "zoot suit," sell at $2.50 a pair.

There's a good variety of blouses, with white rayon ones selling at $1.26 and prints and seersucker ones selling at $1.43. You can get the latter in both checked and striped patterns.

Most popular item appears to be a natty blue snood cap, which not only serves to hold flowing tresses in place in a comfortable manner but is also attractive to look at.

Purchase of the uniforms by the company is the first experiment by the Tucson Division in securing such equipment for employes at the lowest possible cost and passing the saving on to workers.

All purchases are for cash only, and women employes are asked to make their purchases during rest periods.

GET MARRIED: Into double harness last Saturday went Ernest Hedden (8) and Glee Morrison (8). They were married by Rev. R. S. Beal at the First Baptist Church chapel. Mrs. Hedden works in the Modification Stockroom and her husband in shop dispatching.

Liberators To Play U. of A. Wildcats; Chargers Victors

Convair's Liberators, unbeaten in YMCA City Basketball league play and winners of the first half of the league, will tangle with the University of Arizona Wildcats on the High School floor Friday night, at 8 p. m., Manager Bert Darling announces. Admission will be 50 cents and 25 cents for enlisted army personnel.

It will be the first time the Liberators and Wildcats have met, and in view of the Convair club's success so far this season may well be one of the hottest games seen in these parts this year. Although the University five is accorded a slight edge, Coach Johnny Hansen's Libs are capable of turning in a top notch performance if able to get a full first string team on the floor on that night.

The Liberators opened the second half of the Y league play Monday by trouncing the Swap Jockies, 64 to 10. Rudy Delgado led the way for the winners when he racked up a total of 26 points, despite the fact that he only played during the first half. Hector LeDesma accounted for 12, Irwin Coulson 10, Dan Clark and "Eric" McNair, six each.

Chargers Win, Lose

The Convair Chargers, Recreation League team, lost a heartbreaker to the Marana Ramblers last week, 62 to 61, and Monday night squeezed by the Sunset Dairy, 52 to 51. Delgado led the way in both games, registering 31 points in the first game and 34 in the second. Against Marana Ben Benites rang up 13 points, Hank Fonseca and Tony Rios six each, and George Robles five. Against the Dairymen, Benites accounted for nine, Robles six and Bert Arce two.

The Bombers, playing their best game of the season, bowed to the Marana Service Squadron, 48 to 21. George Gray accounted for 11 of the Bombers' points, Eddie Green four, Joe Irving four and Ernie Batiste two.

The Chargers continued their winning streak by topping the Convair Armament five, 42 to 24, Wednesday night on the Armory floor. Lange and Kaliano led the losers while Delgado again was high man for the winners. The Armament five scored 20 of their points in the second half.

Cheer 'em up

Allocate a bit of your spare time to write, telephone or pay a visit to the following Convairites who are ill and unable to be on the job:

Miss Ruth Carroll (7), St. Mary's hospital.

M. H. Rose (110), St. Mary's hospital.

Chuck Duisen (47), St. Mary's hospital.

OUT OF UNIFORM: Dotty Conrad (8) lived up to a threat she made many months ago last week and appeared for work in a dress for the first time since joining the Tucson Division nearly a year ago. We still expected her to hold out for boots, but she went all out on us. It was strictly a one day performance, however, and Dotty is back in slacks again . . . and boots.

NEW COFFEE STAND, RESTAURANT SCHEDULE

Effective Wednesday of this week a new schedule for both the coffee stand, on the mezzanine floor between Hangars No. 1 and 2, and the plant restaurant was put into operation.

The Coffee Stand will be open for service from 6:30 a. m. to 6:55 a. m.; 11 a. m. to 12 noon and 7:30 p. m. to 8:30 p. m.

The Restaurant will be open from 6 a. m. to 8 a. m. and from 11 a. m. to 6 p. m.

☆

G. J. NEWMAN VISITOR

George J. Newman, Division Manager of Fort Worth's Convair plant, was a visitor to the Tucson Division this week.

SEVEN EMPLOYES DIVIDE $42.00 IN SUGGESTION AWARD MONEY

Seven employes won awards totalling $42 this week for ideas submitted to the plant suggestion award committee. Their suggestions will result in an estimated saving of 741 manhours annually.

Highest award, $9, went to E. W. Bambauer (142) for his suggestion for test equipment for cylinder head temperature indicators. His idea will save an estimated 312 manhours annually.

Next high money went to Herb Miles (192) for a set of tools for overhauling the seven piston hydraulic pump. The set of tools will save 312 manhours annually, the committee estimated. Miles has won more awards than any other Convairite although his earnings have been topped by several others.

Michael Illin (192) was awarded $5 for his suggestion for a holding device for main landing gear brake shoes. His suggestion will save 117 manhours annually.

Other $5 awards went to R. M. Heller (101) for his idea for reworking holddowns on power shear to prevent hazard; to B. P. Nicholas (7) for her idea for a manual of procedure for stenographic personnel; to H. A. Conway (194) for his idea for a stand above the camera hatches while relocating oxygen fixtures, and to H. G Chappalear (140) for a suggestion for caution signs to eliminate damage to the manifold pressure selector.

SAFETY - 1945

SAFETY PROGRAM CUTS DEATH TOLL

N.Y. Times

National Council Reports Drop of 8% in Fatal Accidents in Period of 2½ Years

Feb. 6, 1945

$1,000,000 FUND SOUGHT

Campaign for 1945 Schedule of Public Service Will Begin This Week

A drop of 8 per cent in the national death toll from accidents has been noted since the public service program of the National Safety Council was put into effect two and a half years ago, William A. Irvin, chairman of the board of trustees of the organization, announced yesterday. He disclosed that a campaign would be started at once to raise $1,000,000 for carrying on the program in 1945.

In 1944 there were 3,500 fewer deaths from accidents than in 1943, Mr. Irvin reported. Comparing the two years in detail, he said the all-accident death toll was down 5 per cent, home accident deaths were off 6 per cent, deaths from public accidents were cut 9 per cent, occupational fatalities were down 3 per cent and accidental deaths among military personnel were 8 per cent lower.

"Until about three years ago," Mr. Irvin reported, "safety work in this country was confined largely to the fields of industry and traffic, with the result that no strongly organized effort was being made to prevent about half of our accident losses. When it is considered that these losses amounted to nearly 100,000 people killed, 9,000,000 injured, 350,000 permanently disabled and a $5,000,000,000 economic loss every year, it seems obvious that some serious effort to bring the situation under control was inevitable."

Comparison With Wars

During the thirty-two years for which accurate records have been kept, accidents have cost the lives of more than three times as many Americans as have been killed in all of this country's wars combined, according to Mr. Irvin. He related that from 1913 to 1944, inclusive, accidents killed 2,902,000 persons, while from the Revolution to Dec. 21, 1944, wars cost the lives of 794,418 Americans.

"The National Safety Council's public service program," Mr. Irvin went on, "is the first organized effort to be directed against all types of accidents among all elements of the population in this country, and the first to give substantial promise of reducing the accident toll eventually to a fraction of its present size.

"This program is now in operation from coast to coast and is affecting the safety of at least half the country's population. It is being carried on by the council through its national headquarters and four regional offices in close cooperation with State and community councils throughout the country. Hundreds of other agencies and volunteer groups of all kinds in all parts of the country have also been mobilized behind the effort and are actively assisting in reducing accidents in their various regions and spheres of influence."

Comparison With Wars

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Public Service Fund

President Roosevelt and other high governmental officials, as well as scores of business and industrial concerns throughout the country, were said to have urged continuance of the work. Mr. Irvin, formerly president of the United States Steel Corporation, announced that to raise the $1,000,000 needed the council was organizing the National Safety Council Public Service Fund, through which leading companies in all major branches of business and industry would receive an opportunity to subscribe.

Mr. Irvin is chairman of the council. Robert C. Stanley is vice chairman and Thomas W. Lamont is treasurer. Other members are Winthrop W. Aldrich, Melvin H. Baker, Lawrence D. Bell, James B. Black, S. Bruce Black, Morgan B. Brainerd, John W. Carpenter, William G. Chandler, Kenneth B. Colman, Howard Coonley, Frederick C. Crawford, Walter J. Cummings, Richard R. Deupree, Benjamin F. Fairless, Walter S. Gifford, John Gunn, E. Roland Harriman, William M. Jeffers, Horace P. Liversidge, Thomas I. Parkinson, Seton Porter, William A. Simpson, John Stilwell, Juan T. Trippe, Harry C. Wiess, Charles E. Wilson and Charles Edward Wilson.

WELFARE COUNCIL
ASKS $499,323 FUN

Highest Budget in History
Group Needed for Program
This Year, Leader Says

FOSTER HOMES INCLUDE

Other Activities in Expande
Field Listed at Meeting of
Board of Directors

Col. Allan M. Pope, president
the Welfare Council of New Yor
City, announcing an annual budg
totaling $499,323, the largest in th
council's history, at a meeting ye
terday of its board of directors
the Bankers Club, 120 Broadwa
said that it was "normal and a
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the community expects the counc
to carry on during 1945."

"Although a half-million-dolla
budget is unprecedented in th
twenty years of council existence,
he added, "the current year is
crucial one. At a time when war
born problems of unusual magni
tude face the community, post-wa
uncertainty is casting its shado
before it. This is a situation whic
brings new challenges and new op
portunities for planning to th
council's 600 member agencies an
consequently to the council itself.

He revealed that the budget pro
vided, in addition to continuatio
and expansion of normal coordinat
ing programs and direct services
for a number of other items.

Activities in Program

These include promotion of th
expansion of foster family board
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a workers' personal service bu
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He asserted that the self-sup
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The basic reason for such a high budget is the fact of its being keyed to the reorganized structure of the council, and to the volum of demands upon it, he declared. He explained that this required increased personnel to give staf service to the many new activ committees.

Provision is made also for a number of other projects to b decided upon and planned by th council's major committees, h added.

PARENTS HAIL SHIFT OF LUNCH PROGRAM

Transfer of the school lunch program here from the Department of Welfare to the Board of Education was hailed as a "major development" yesterday by Mrs. Rose Shapiro, president of the United Parents Association of New York City. Addressing association delegates at the Hotel Pennsylvania, Mrs. Shapiro pledged endorsement of the new school lunch program set-up, which she said "removed the stigma of relief from the children of New York City and assured the improvement of their health standards."

With the relief aspect removed, Mrs. Shapiro said, the Board of Education could now develop a constructive nutritional program and "build a set of good food habits youngsters." To assure this,

WAR PLANTS TO SELL CLOTHING FOR WOMEN

NY Times March 14, 1945

Special to THE NEW YORK TIMES.

WASHINGTON, March 13—A production program for women's slacks, coveralls, shop aprons and overalls, under which low-cost garments will go directly to war factories for sale to workers on the job, thus precluding their use as sportswear, is being formulated by the Office of Civilian Requirements of the War Production Board.

OCR officials said today that this program was already well under way as an emergency program under M-328B, the same category as the low-cost children's clothing programs, when witnesses before the Smith committee hearing brought out the need in the Southwest for medium-priced rayon for women's slacks as work clothes under M-388, the comprehensive order channeling a large percentage of all rayon and woolen as well as cotton fabrics into essential civilian garments.

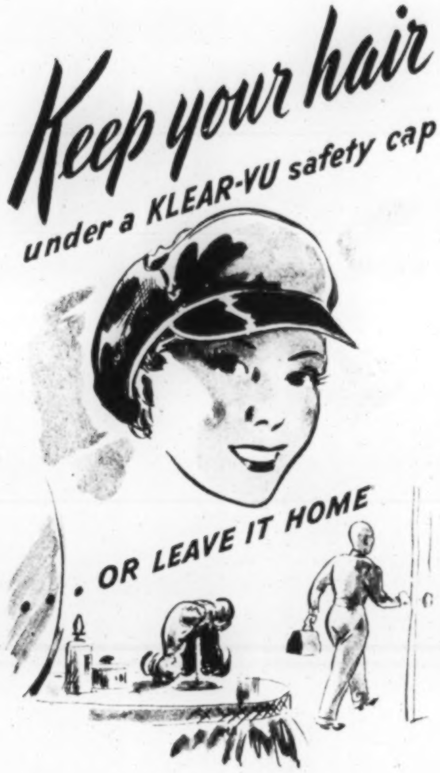
Additional women's work slacks may be made possible by amendment of M-388, OCR officials said.

In the case of the low-cost work slacks and slack suits under the pending M-328B order, manufacturers will be permitted to take orders from defense-plant employers and the garments will be sold at the plant directly to the workers.

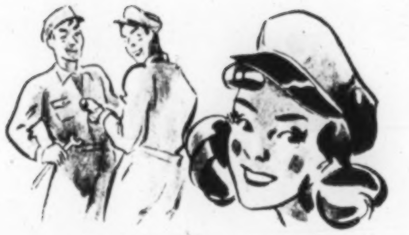
NEW YORK TIMES
MARCH 14-1945

SAFETY - CATALOGS

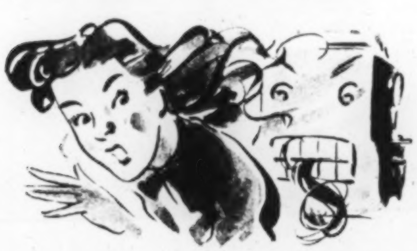
REPRODUCED FROM THE HOLDINGS OF THE NATIONAL ARCHIVES


Keep your hair
under a KLEAR-VU safety cap
. OR LEAVE IT HOME

REPRODUCED FROM THE HOLDINGS OF THE NATIONAL ARCHIVES



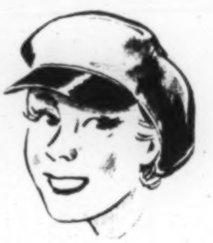
For the Sake of Admiring Glances . . .



. . . DON'T RISK YOUR HAIR!

Don't take chances! When working, always wear your Klear-Vu Safety Cap. Designed by safety engineers, your Klear-Vu Cap completely protects you from the danger of hair entanglement in moving machinery.

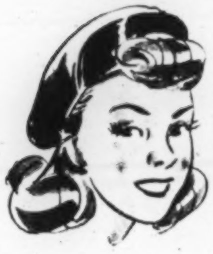
WEAR YOUR KLEAR-VU SAFETY CAP LIKE THIS



Keep ALL your hair under your Klear-Vu Cap. If you expose your bangs and curls, you are exposing yourself to the danger of SCALPING! Remember, if you're careless, you may be hairless! Wear your Klear-Vu Cap properly.

●

IT'S NOT A SAFETY CAP WHEN WORN THIS WAY



Here's a girl that's kidding herself. Her hair is exposed. She's inviting trouble whenever she's near moving machinery. Wear your Klear-Vu Safety Cap properly.

REPRODUCED FROM THE HOLDINGS OF THE NATIONAL ARCHIVES

OTHER SAFETY HINTS

- *Report Accidents Immediately*
- *Wear Safety Goggles and Safety Shoes Where Necessary*
- *Don't Leave Elevator Shafts Open*
- *Don't Leave Your Tools Lying Around*
- *WEAR YOUR KLEAR-VU SAFETY-CAP, AND BE SURE TO KEEP ALL YOUR HAIR TUCKED-IN*
- *Always Be Careful*
- *Always Watch Your Step*
- *Report Immediately All Equipment That Is Out Of Order.*

STOP ACCIDENTS

SPEED VICTORY

KLEAR-VU PRODUCTS CO.
133 Monroe Street Newark 5, N. J.

REPRODUCED FROM THE HOLDINGS OF THE NATIONAL ARCHIVES

COPYRIGHT 1943, HOLLYWOOD TURBAN PRODUCTS CO., CHICAGO

PRINTED IN U. S. A.

Nola Robison

Hollywood Turbans

BY Sandra

An essential hair protection for women workers in

- AIRCRAFT PLANTS
- ORDNANCE PLANTS
- CHEMICAL PLANTS
- SHIPYARDS
- INDUSTRIAL PLANTS

HOLLYWOOD TURBAN PRODUCTS CO.
902 S. WABASH AVENUE CHICAGO 5, ILLINOIS

ACCLAIMED BY OVER 1300 INDUSTRIAL and ORDNANCE PLANTS

• No Loose Ends • Prevent Vital Injuries and Delays • Safety with Style

No. 20

The "Original" Hollywood Turban

The ideal "all-purpose" Turban-Net. A hair protector for clean work. Elastic loops. Adjustable to any head size. Washable. *Colors:* Royal Blue, Green, White, Brown, etc. Individually packed in glassine envelopes.

PRICE, PER DOZEN..........................

SAFETY FOR YOUR WOMEN WORKERS IS AN IMPORTANT FEATURE OF YOUR PRODUCTION

No. 40

The Hollywood "Krinkly Kool" Turban

Ideal for women engaged in dusty work at or around machinery. The same protective features as in No. 20. Adjustable and washable.

Colors: Blue, Maroon, Green for heavy duty, and White for bakery and cannery workers. Individually packed in glassine bags.

PRICE, PER DOZEN..........................

No. 42

The Hollywood "Khaki" Turban

A lighter Turban made from broadcloth and other washable materials. Same features as the No. 20 Turban. In Khaki, Green, White. Individually packed in glassine bags.

PRICE, PER DOZEN..........................

No. 21

The Hollywood "Showerette"

These are more popular than ever. Made from a processed waterproof material. Draw string style. Adjustable to fit any head size. For bath or shower. Attractive shades. Packed in individual glassine bags.

PRICE, PER DOZEN..........................

HAIR ENTANGLEMENT IN MACHINERY IS A TRYING CIRCUMSTANCE FOR YOU TO FACE

"Recommended by The Insurance Underwriters of America"

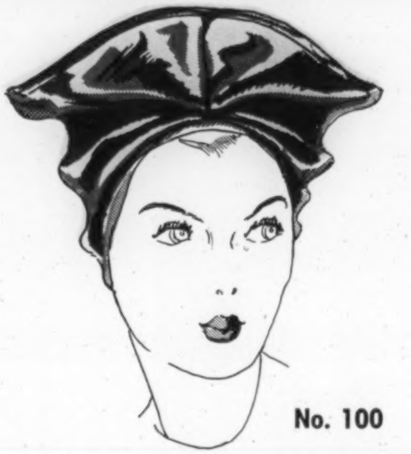
WRITE FOR SAMPLES

HOLLYWOOD TURBAN PRODUCTS CO.

902 S. WABASH AVENUE
CHICAGO • ILLINOIS

PRICES ARE F.O.B. CHICAGO
TERMS: 2% ten days

THREE NEW ESSENTIAL ITEMS

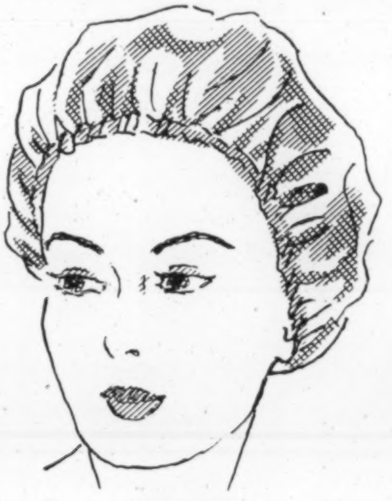


No. 100

The "Glamorette"

Something new! "Safety with Style." Made of printed coated rayon. Grease resistant, dustproof, waterproof. Back has elastic to make a good-fitting cap. Packed individually in glassine bags. Practical as well as an attractive protection for women doing work in industrial plants. *Colors:* White design on blue background.

PRICE, PER DOZEN..........................



No. 110

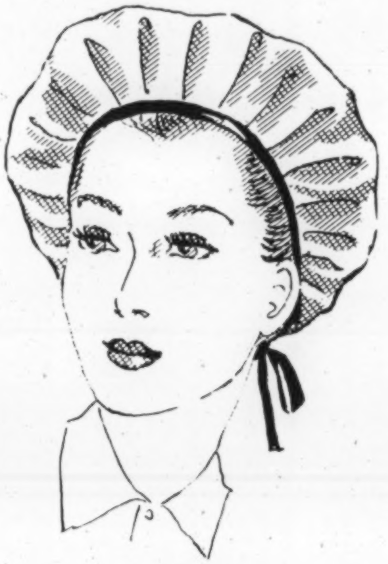
The Hollywood Round "Quick-on" Shower Cap

To satisfy a demand for a "Quick-on" shower cap, we have designed this inexpensive cap. Of a waterproof rayon. Elastic edge. Large size. Covers entire head and hair. Packaged in individual glassine bags.

PRICE, PER DOZEN..........................

PROMOTE YOUR WORKERS' MORALE BY FURNISHING HOLLYWOOD TURBANS!

WOMEN WANT THEIR HEADS TO BE TRIM LOOKING



No. 120

The Hollywood "Capette"

Made of light weight material with contrasting border. Ties in back. Altogether a very attractive protective cap at a low price.

Packed individually in glassine bags.

PRICE, PER DOZEN..........................

ORDER NOW FOR PROMPT DELIVERY

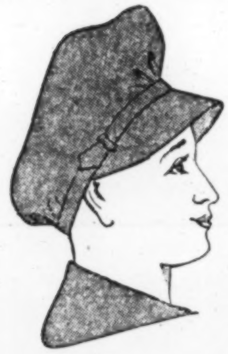
Safety Caps for Women in War Factories

The public has been shocked and employers have been equally distressed by serious injuries to women war workers occurring because safety caps were not worn or hair was not tucked into the cap.

These injuries can be prevented!

Wear safety caps when the job requires!

Tuck hair fully under the cap!



WOMEN'S BUREAU
U. S. DEPARTMENT OF LABOR
Special Bulletin No. 9
October 1942

WHY WEAR SAFETY CAPS?

1. To Prevent Scalping Injuries

Feminine hairdress and machinery often combine badly. Pain, costly medical care, and permanent disfigurement result when hair tangles in machinery. The following happened to women in war factories:

An operator of a spinning machine bent over. Her hair caught in the machine. She was totally disabled for 16 weeks as a result of her injury, and for 45 weeks longer was partially disabled. The injury cost $570 in compensation.

In an ordnance factory, a woman operating a barrel-turning machine leaned too close and her hair was pulled around the barrel. A large clump of hair was torn from her head. She spent days in the hospital recovering from the wound and the shock.

Such examples could be repeated many times. *Every such accident could have been prevented.*

2. To Prevent Skin Infections

Personal cleanliness ranks high in preventing skin infections. Face, hands, and arms can be washed several times a day, but hair cannot. *Hair tucked under a cap will keep clean.* The girl in the example following learned this the hard way, by experience.

A girl in a war production plant suffered a face dermatitis from dirt and grease deposited on her pillow from her hair.

3. To Prevent Serious Burns

Holding a welding torch while brushing back locks from your forehead is dangerous.

A girl spot welder in a lamp factory learned this when sparks ignited her hair. She was lucky to escape serious burns.

Keep the Cap On!

WHO SHOULD WEAR CAPS?

Machine Operators.—Every woman working on or near machinery should wear complete hair covering. Hair will entwine in moving machine parts and cannot be removed before it is pulled out by the roots, sometimes tearing the scalp.

Welders.—Electric and acetylene welders should wear fire-proof hair covering.

Workers Exposed to Dust or Fumes.—Need covering to protect hair and to prevent carrying toxic material on hair.

Workers Exposed to Oils or Grease.—Need covering to protect hair and to aid in preventing skin infections.

WHAT IS A GOOD CAP?

A good cap is safe, comfortable, attractive.

*1. **Safety.***—For a worker exposed to machines, a cap must completely cover the hair. Stray curls or wisps of hair can be caught in a machine; partial scalping may result. Headsize should be so generous that hat will be thrown off if it strikes a machine part. Height and stiffness are essential. Height warns the girl that her head is dangerously near machinery. Stiffness guarantees that the cap will not catch in machines. A hairnet alone is not safe; worn fully under a cap, it may help.

Machine operators should not wear a turban or bandanna. It may expose hair, or machines may catch loose ends of cloth. Closely woven washable turbans are good for dusty jobs with no machine danger.

*2. **Comfort.***—Caps must be comfortable and light in weight. This helps in enforcing the wearing of caps.

*3. **Attractiveness.***—Appearance is important to women. If a cap looks well, women will want to wear it.

ENFORCE USE OF SAFETY CAPS!

Introducing Safety Caps.—A sudden order from the office that all women wear safety hats is not the best way. Better is an experimental period, for women workers to suggest improvements and safety officers to observe. In a company using this method, girls were surprised to find the caps warned them how close to the machines they were.

Enforcing Safety Rules.—Half the enforcement battle is won if safety caps are comfortable and attractive and are introduced by wise methods. Persuasion is better than compulsion. Suitable caps, good supervision, good factory morale, are basic in insuring compliance. In many shops all women wear caps without question.

Work of a woman supervisor or personnel manager often secures cap-wearing. Women resent admonitions about clothing from men. A matron in charge of women's locker rooms as each shift begins can check cap-wearing.

Individual backsliders may appear, and the trouble may spread. For new workers, cap-wearing should be made a condition of employment. An employee who repeatedly breaks the rules must be disciplined wisely, possibly in extreme cases suspended.

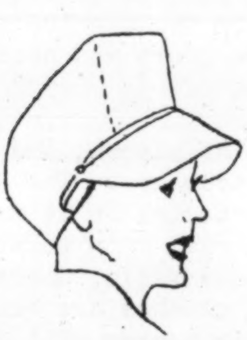
Continuing Safety Education.—Vigilance must not be relaxed. Regular safety meetings, especially for women, should be held. These can repeat at intervals reasons for keeping hair covered, and shop rules as to this. Photographs, motion pictures, and posters showing correct cap-wearing help. Gruesome propaganda is a mistake in safety education and is not effective.

Guard Machines Completely. Safety Caps Are No Substitute for Guarding

493780—42 U. S. GOVERNMENT PRINTING OFFICE: 1942

For sale by the Superintendent of Documents, Washington, D. C.
Price 5 cents

WHAT THE WELL-DRESSED
NYA WOMAN WORKER
WEARS......



National Youth Administration
Washington, D.C.

The safe worker is the well-dressed worker. Every girl wants to know the latest fashion dictates and be dressed accordingly.

So - here is the news!

*

The fashionable girl today is the factory worker dressed in the newest coverall or slack suit. The coverall is made of a sturdy material and fits her well so that she can move freely at her machine. It has no frills—no loose pockets or belts—and no buttons that can catch in the machine and pull her in too. The sleeves are short and have no cuffs. Neither do the trousers.

The slack suit consists of slacks, and a shirt or blouse tucked into the trousers. The suit is sometimes made all of one material or it may have a blouse of a lighter material worn tucked into the trousers. As with the coveralls, there are no frills or furbelows. All work clothes are well laundered and pressed so that their wearer will at all times look fresh and attractive.

*

Aprons are not being worn in any shops, except in welding, foundry, forge, and machine shop, and in the latter only on rare occasions when the oiling of a machine may soil the coverall or slack suit. Aprons for this special occasion are made of denim and fastened either with snaps that will open or strings that will break if the apron should catch in a machine.

*

Jackets or long sleeve sweaters are not a part of the well dressed girl's working clothes. And above all—long sleeves that are rolled-up are taboo!

And what does the well dressed factory worker do about her hair, since she does not want to lose any to the machine? One authority gives this excellent advice:

> "It is better to show no hair at work
> Than to have none to show at home".

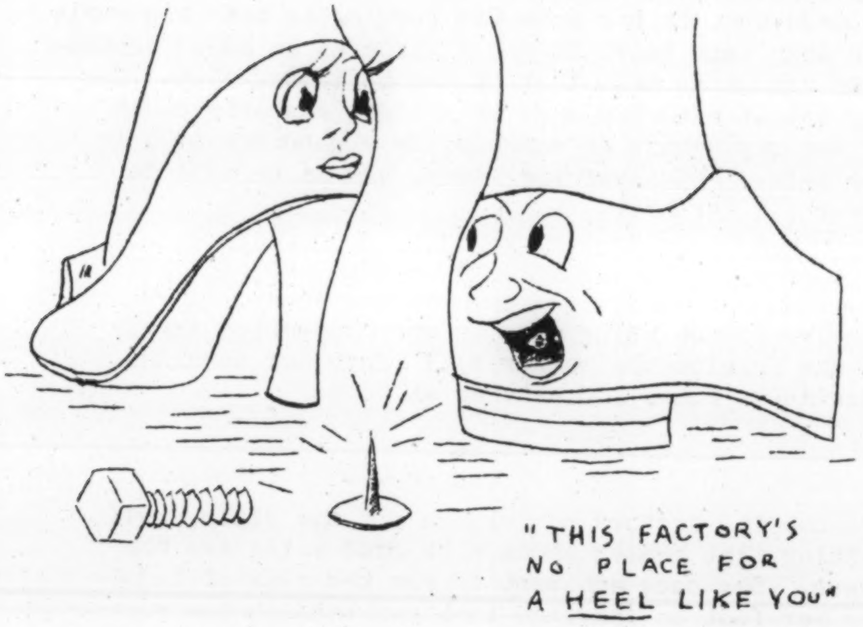
So, our stylish worker wears headgear that will cover all of her hair. Sometimes she selects a cap that is so made that it has room for tucking in both top curls and long back hair. It has a visor as an added protection and is so made that it can be ironed flat. She may select a turban made of a light washable cloth or she may decide on a snood, or a bandanna tied in the back. Whichever she wears, she is careful to cover all her hair.

*

Jewelry is not being worn in war production work. So the fashionable worker will leave her earrings, necklaces, rings and watches at home.

*

Because the factory worker has set the style, well fitting flat heeled shoes with good soles are the vogue. She does not want to run the risk of injuring her foot on shavings that cut through the soles of her shoes, which may happen if the soles are too thin or are worn out. If she wears high heels, she is apt to slip and fall, and she will grow very tired before the eight-hour work day is over. Safe shoes have solid toes made with a boxing, and the more foresighted women select shoes made with special safety toes. The shoe manufacturers recognizing the workers' needs, are stressing attractive new models of safe shoes.


"THIS FACTORY'S
NO PLACE FOR
A HEEL LIKE YOU"

Prepared by the Division of Operations

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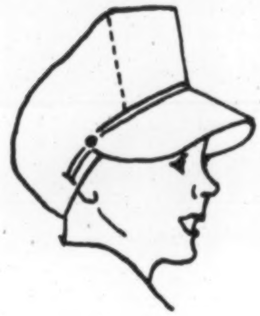

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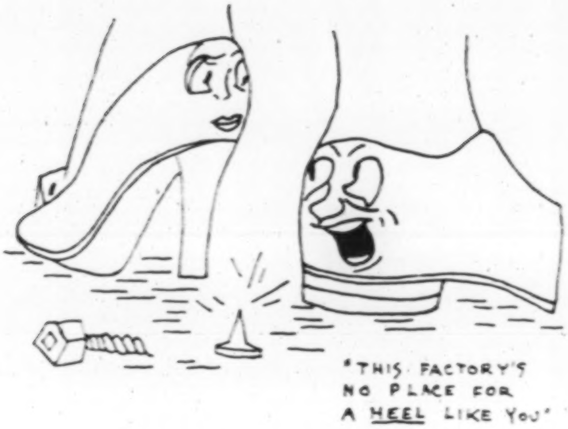
"THIS FACTORY'S
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Prepared by the Division of Operations

All interested

Letters showing interest in the study of women's work shoes has been expressed through requests for copies of articles published or reprints of the entire series by many shoe manufacturers and such organizations as General Electric Co.; International Business Machines Corporation; Mary Taylor, Editor of "Consumers' Guide"; Mary Rokahr, Extension Economist, Home Management, Department of Agriculture; Mary Anderson, Director of the Women's Bureau, Department of Labor; Jesse O. Irvin, Director of Information, Federal Security Agency; Augusta H. Clawson, Special Agent, Training for Women Defense Workers, U. S. Office of Education; L. S. Hawkins, Director, Vocational Training for War Production Workers, U. S. Office of Education; Wendell Lund, Director, Labor Production Division, War Production Board; Republic Aviation Corporation; Schleisner Co., Baltimore; The Travelers Insurance Co.; Helen Hostetter, Editor of "Journal of Home Economics"; Marshall Field & Co., Chicago; Metropolitan Life Insurance Co., New York; National Safety Council; Mrs. Harriet Howe, in charge of Consumer Education Service of the American Home Economics Association; several women in charge of Home Economics Extension Work in the Central, New England, Southern, and Western states; editor of "Domestic Commerce," Department of Commerce; Paul V. McNutt, Office for Emergency Management; Willis S. McLeod, chief, Standards Section, Consumer Division, OPA; Munsingwear, Inc.; editor of "Good Housekeeping Magazine"; Mrs. Alma H. Scott, R.N., American Nurses' Association.

Don't miss reading this in the September 1 issue of Hide and Leather and Shoes. *Reprints in booklet form are available at 15c each or 10c in lots of fifty or more.*

HIDE *and*
• **LEATHER** •
and **SHOES**

300 W. ADAMS ST., CHICAGO 6, ILL.

Lyddane, ~~Blood~~, RFy

Womanpower needs Footpower

DURING the first week in September thousands of the nation's magazines will participate in an important wartime information program on the theme of WOMEN IN NECESSARY CIVILIAN JOBS, sponsored by the Office of War Information and the War Manpower Commission. The manpower problem today is, in great part, a woman power problem. By the end of 1943 it is estimated that 17,400,000 women must be at work not just in factories but in stores, schools, and offices as well. Any job a woman takes which releases a man for military service or heavy industrial work is a *war* job.

To coincide with this nationwide effort to obtain the maximum woman power available, Hide and Leather and Shoes will publish in its September 4 issue an extensive summary of a series of articles which reported the findings of a thorough study of women's work shoes—the need in peacetime and wartime for such shoes, the present and potential market, their design and production, a list of the producers, the cultivation of the market and distribution.

Hide and Leather and Shoes has set the ground work and built a solid foundation for an entirely new market for the shoe industry and practically every producer of material and supplies that go into shoes. It has opened a new avenue for business which will add considerably to the respect, profit, and good will of the shoe industry and its suppliers through the satisfaction women receive from footwear which will increase their efficiency, safety, and comfort, as well as appearance.

It was pointed out editorially in Hide and Leather and Shoes in February, 1942, that "women, married and single, have always worked and have often worked harder than men, and that it doesn't make much difference, in terms of labor, whether they scrub floors and change diapers, or whether they work in offices, stores, and factories."

Refusal to accept the bald fact that women work has been for many years the underlying reason why most women are not dressed properly for their work . . . Last year the shoe industry made almost 28 million pairs of work-type shoes for men (civilians) but it didn't make a single pair of shoes under a women's work shoe classification . . . This study showed conclusively that most working women now wear footwear which is injurious to foot health, uncomfortable, and unsafe; that there is a potential market here for a whole new classification of footwear . . . that work shoes for women could be easily and profitably made and readily sold.

Many shoe manufacturers, wholesalers, retailers, foot health authorities, stylists and employers were personally interviewed. Thousands of working women were asked about the shoes they wear and the shoes they want for their working hours. Materials, styles, constructions, selling prices, and even psychological factors were studied thoroughly in the course of this vitally important survey.

★ ★ ★ ★ ★

The letters in this folder are typical of many we received on this study of the need and market for suitable shoes for women who work.

★ ★ ★ ★ ★

Deep and timely interest

"Your study of the potential demand for women's work shoes is of deep and timely interest.

"With leather mentioned as the seventh most important war material, any commodity consuming this vital product is a factor in the total war effort. Women's work shoes, then, should by the nature of their construction be capable of performing real functional services in order to warrant their promotion as a consumer necessity.

"To arrive at maximum functional performance criteria, agreement as to the best basic specifications for such shoes would be desirable. If your study or questionnaire can raise this issue we believe an important service will have been rendered.

"We will follow this series with continued interest."

Dexter M. Keezer, *Deputy Administrator, OPA.*

IM HERE FOR THE DURATION AND POST-WAR PERIOD
47
46
1945
1944
1943
LADIES WORK SHOE
1942

Bound to be helpful

"We want you to know that we appreciate the information you have given us in your letter of July 24 on recent activities by your magazine looking toward more satisfactory work shoes for women. It would seem that efforts such as you are making are bound to be helpful in developing women's work shoes that will be designed to permit the comfort and safety of the wearer . . . Although the committee has not as yet prepared any proposed specifications for women's safety shoes, it is altogether likely that attention will be given to this phase of the problem within the next few weeks. The information you have furnished us will be helpful.

"We shall see that any proposals for women's safety shoes that may be under consideration are passed on to you for study."

H. M. LAWRENCE, *Materials Engineer, American Standards Association.*

Specifications very good

"We feel that the specifications that you have laid out for these shoes are very good, and we cannot help but feel that the work you are doing along this line will prove very helpful if and when the government makes order M-217 more severe."

H. T. BUTLER, *General Shoe Corporation.*

Much good should result

"We have read with considerable interest the article in HIDE AND LEATHER AND SHOES which deals with basic specifications for women's work shoes. This is a splendid article and, we feel, very timely. Much good should result from the effort you are putting forth to standardize women's work shoes."

C. W. MATHIESON, *Style Dept., International Shoe Co.*

American Standards Association interested

"We gather from copy of letter signed by Dexter M. Keezer, Deputy Administrator of the Consumer Division, OPA, that your organization is making some study of the potential demand for Women's Work Shoes.

"In this connection you may be interested to know that the American Standards Association has just been requested by the WPB and OPA to develop some standards for protective occupational footwear. One meeting of the War Standards Committee was held some ten days ago and a second meeting is scheduled for next month. The enclosed document will give you the basis under which the ASA program is being carried out.

"As part of this work some attention may be given to characteristics of women's work shoes. We should appreciate any information that your studies may turn up to serve as background for material should the committee decide that the development of specifications for women's work shoes should be undertaken."

H. M. LAWRENCE, *Materials Engineer, American Standards Association.*

Very intelligent and important

"May I say that I have read each of the articles with interest and am of the opinion that it is a very intelligent and important study. There is no doubt that proper work shoes are of considerable importance with working women, and from what I have seen in the country, there is a serious lack in the supply of proper work shoes."

THELMA MCKELVEY, *Principal Assistant, Women's Program, War Manpower Commission.*

Outstanding contribution

"This Bureau has for the past year been designing various types of work garments for women . . . In this connection I have been impressed by the serious lack of suitable shoes for women now going into industrial and farm work . . . Well fitting, sturdy, protective shoes are a necessity if these women are to maintain their health and successfully carry this extra load . . . I am delighted to see that in your publication, HIDE AND LEATHER AND SHOES, you are stressing the need of an immediate solution of this problem. We will be very glad indeed to do anything we can to help you in your efforts to get suitable shoes built for farm and factory workers and so widely distributed that they will be available throughout the country. If this can be done, it will be, in our opinion, an outstanding contribution to the war effort."

RUTH O'BRIEN, *Chief, Division of Textiles and Clothing, Bureau of Home Economics, Department of Agriculture.*

Agree with specifications

"I can agree almost 100% with the specifications for women's work shoes outlined in your issue, and so far as the need for such shoes is concerned I am in complete agreement. . . . We know that improper, that is, inappropriate, shoes lead to foot ailments, cause accidents, lowered efficiency and morale, slowdowns, loss of time away from work, and often large sums paid out in workman's compensation. Correct shoes will eliminate an appreciable per cent of this loss."

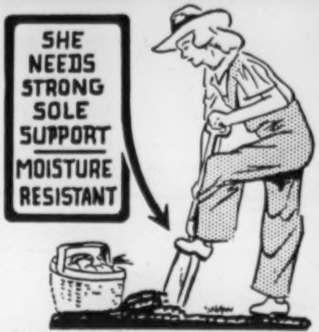
A. OWEN PENNEY, D.S.C., *National Association of Chiropodists.*

"THIS FACTORY'S NO PLACE FOR A HEEL LIKE YOU."

Better Fitting and more comfort

"I am glad to know that you are going to have a reprint of the series of articles on women's work shoes. I have read these with a great deal of interest and believe that if these suggestions can be successfully carried out we shall have better fitting and more comfortable shoes for women."

JULIA E. BREKKE, *Extension Agent in Clothing, State of North Dakota.*


SHE NEEDS STRONG SOLE SUPPORT
MOISTURE RESISTANT

Important shoe problem

"The work you are doing will, I hope, serve to get into production shoes really needed by women in this emergency. Every personnel manager . . . should be contacted immediately to find out what cooperation they can give in this important shoe problem. Thousands of hours of work are lost because of foot fatigue."

HILDEGARDE FILLMORE, *Style and Beauty Editor, McCall's Magazine.*

A noble work

"You are doing a noble work in attempting to solve some of the problems confronting us today. Our research has revealed that much fatigue and inefficiency is brought out by improper foot gear of the workers."

DR. C. F. SCHMIDTMANN, *Secy.-Treas., Foot Health Foundation.*

Of sound value

"The work done by your Mr. Henderson in this series of articles on women's work shoes is of sound value. Of course, we are prejudiced, but we feel it will have a good effect and lasting benefit to the industry as a whole."

W. H. NORRIS, *President, Dixon-Bartlett Company.*

PRICE LIST OF WELDERS' SAFETY CLOTHING

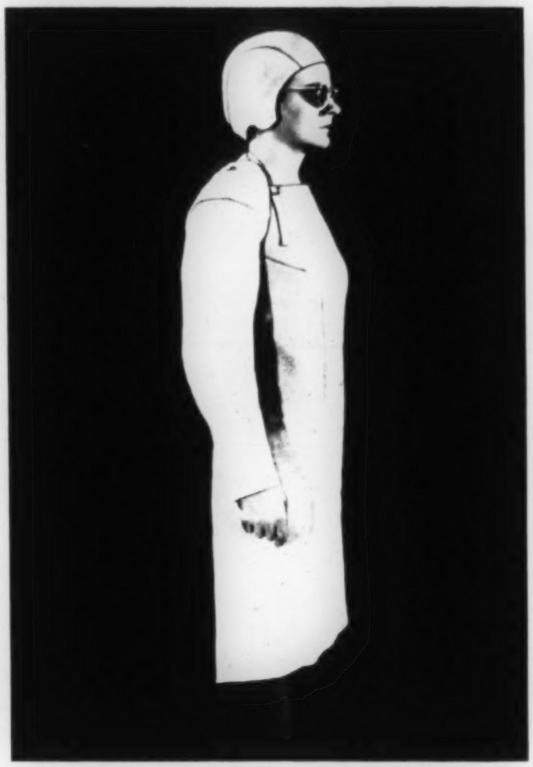
(Covering all items pictured and described in
Welders' Safety Clothing Booklet No. S-CL-620)

Catalog Number	*Garment*	*In Lots of*	*1-11*	*12-23*	*24-59*	*60 or More*
207-CL	Overalls		$12.00	$11.00	$10.00	$9.00 per pr.
205-CL	All-Leather Pants		9.00	8.10	7.70	7.30 per pr.
2X112	Hot Weather Pants		6.75	6.35	6.05	5.75 per pr.
210-CL	Chaps		5.50	5.00	4.25	3.75 per pr.
206-CL	Twenty-Six Inch Coat		9.00	8.10	7.85	7.25 ea.
204-CL	Thirty Inch Coat		10.00	9.00	8.55	8.10 ea.
208-CL	Cape Sleeves		5.00	4.50	4.10	3.50 ea.
208B-CL	Cape Sleeves and Bib		6.00	5.40	4.90	4.50 ea.
203-CL	Short Jacket		6.50	5.85	5.55	5.25 ea.
209-CL	Welders' Sleeves		3.00	2.70	2.55	2.45 per pr.

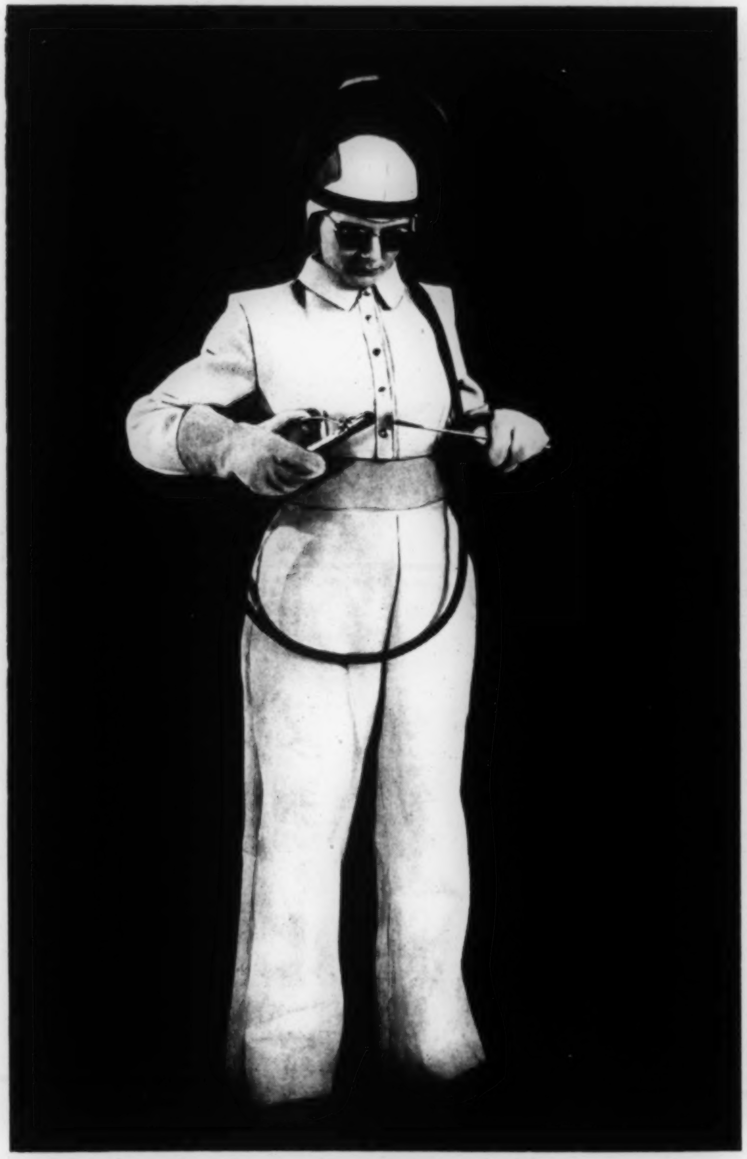
(Over)

American Optical
COMPANY

Welders' Protective Clothing
TAILORED for WOMEN



Debutante Protection Outfit, consisting of Tailored Sleeves and Tailored Apron



COMPLETE ASSORTMENT

300 CL	TAILORED CAP
303 CL	TAILORED SHORT JACKET
306 CL	TAILORED COAT
307 CL	TAILORED OVERALLS
308 CL	TAILORED CAPE SLEEVES
308B CL	TAILORED CAPE SLEEVES AND BIB
309 CL	TAILORED SLEEVES
336 CL	TAILORED APRON 21″ x 36″
3903 CL	TAILORED SPAT
3003	SIZE 8 ONE FINGERED MITTEN
3001	SIZE 8 FINGERLESS MITTEN

Manufactured by
SAFETY EQUIPMENT SERVICE COMPANY
Putnam, Connecticut

Solely for
American Optical
COMPANY
Southbridge, Massachusetts

American Optical
COMPANY

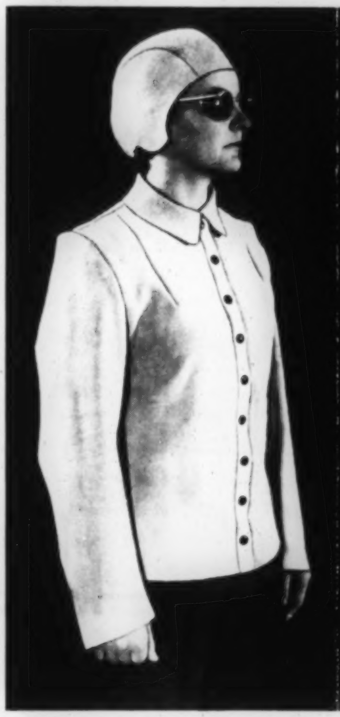
S-CL643A

12 PRINTED IN U.S.A. 42

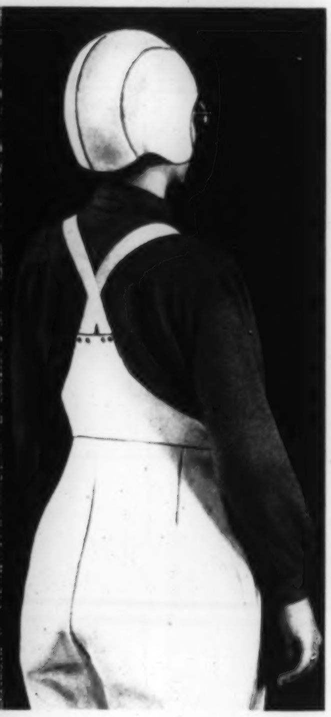
Select the Welders' Protective Apparel You Need From AO's Complete Assortment of Tailored Clothing

EXCLUSIVELY STYLED FOR WOMEN

To handle a welder's job skillfully and efficiently, women need protective clothing that can be worn with ease and comfort. It must be as light in weight as possible, consistent with adequate protection. It must be cut to afford free and easy movement of the body, but fit so snugly that there will be no gaps or openings to permit entrance of flying sparks.



Tailored Coat—Note smart cut, shaped sleeves, and tucks running down from the shoulders.



Tailored Overalls — Note ample roominess at hips and seat. Also note how Tailored Cap protects hair.

Correctly Styled

To combine snug, comfortable fit with smartness, AO engaged an expert designer. As a result every garment in AO's complete line of tailored protective clothing for women has been styled according to accepted dressmaker patterns.

Shaped for Comfort

AO Tailored Overalls are styled like women's slacks. A side placket insures a trim, comfortable waist line. The flared trouser legs provide additional protection for the feet and make the garment easy to put on and take off over women's safety shoes.

The yoked backs of the Tailored Coat and the Tailored Short Jacket permit greater freedom of arm movement. Tucks running down from the shoulders in front provide ample fullness and flexibility at the bust.

Tailored Cap

To protect women's hair and ears during the welding operation, AO stylists have designed a special Tailored Cap. It is made of chrome tanned leather, shaped somewhat like a bathing cap, with flaps extending over the ears. It is fashioned to cover the hair and hold it snugly and comfortably in place.

Selected Materials

AO Tailored Protective Clothing is made of specially selected chrome tanned cowhide. It is light in weight, yet affords positive protection. All garments have a soft suede-like appearance.

Fitted Sleeves

All sleeves are shaped to fit, providing extra comfort and permitting easy arm movement. Naturally, this type of sleeve lasts a great deal longer than a straight, shapeless sleeve which wrinkles excessively at the fold of the arm.

Welted Seams

Seams of AO Tailored Protective Clothing wherever possible, are located away from the direct line of fire. Welted inseam construction is used throughout for extra strength and to protect the stitching from hot sparks. Welted seams also add a note of smartness.

American AO Optical
COMPANY

PRICE LIST

AO Welder's Protective Clothing

TAILORED FOR WOMEN

		1-11	*12-23*	*24-59*	*60 or More*
No. 303-CL	Tailored Short Jacket . . .	$6.50	$5.85	$5.55	$5.25
No. 306-CL	Tailored Coat	9.00	8.10	7.85	7.25
No. 307-CL	Tailored Overalls	12.00	11.00	10.00	9.00
No. 308-CL	Tailored Cape Sleeves . . .	5.00	4.50	4.10	3.50
No. 308B-CL	Tailored Cape Sleeves & Bib .	6.00	5.40	4.90	4.50
No. 309-CL	Tailored Sleeves	3.00	2.70	2.55	2.45
		1-11	*12-49*	*50-100*	*101 or More*
No. 336-CL	Tailored Apron 24″ x 36″. . .	$2.85	$2.55	$2.45	$2.30
No. 3003	Size 8 One Fingered Mitten .	1.30	1.15	1.05	1.00
No. 3004	Size 8 Fingerless Mitten . .	1.30	1.15	1.05	1.00
No. 3903-CL	Tailored Spat	1.50	1.35	1.25	1.20

S-CL643A-1

American AO Optical
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1 PRINTED IN U.S.A. 43

AMERICAN OPTICAL COMPANY

WELDERS' SAFETY CLOTHING

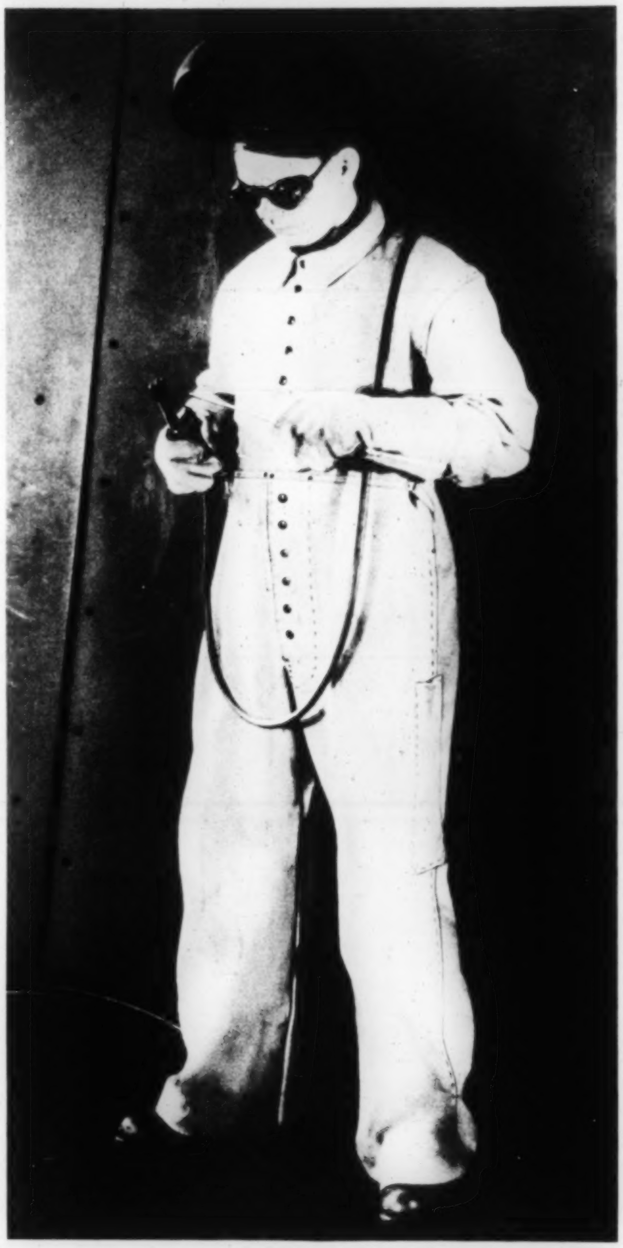
PROTECT YOURSELF AND YOUR JOB · SAVE MONEY ON CLOTHES · · EARN MORE PAY

Welders' Leathers are tools of the trade — just as much as the holder and wire. To turn out first class work — and plenty of it — you must have adequate protection, safety clothing that you *know* will keep hot sparks away from you and your normal work clothes.

AO Welders' Leathers bring you new confidence. They enable you to get right into the line of fire without fear of burns or worry about accidents. They help you turn out more work and better work — so that you can earn higher pay. In addition, you save money on clothes — an important saving on sweaters, woolen shirts, and heavy trousers if you work on outside jobs during the winter.

Check over the protective garments and combinations pictured and described on the following pages. Select the type of protection *you* need in *your* work. You have spent a lot of time learning to hold an arc. Protect your skill, your rating, and your pay envelope.

Specify AO Welders' Leathers to avoid burns and to prevent your everyday clothes from catching fire. This hazard is very real in summer when you wear cotton shirts and dungarees, which are especially inflammable after they become worn and frayed. Equip yourself with AO Welders' Leathers, step up your production, and earn *full* pay for the time and energy, the skill and accuracy you put into the job.

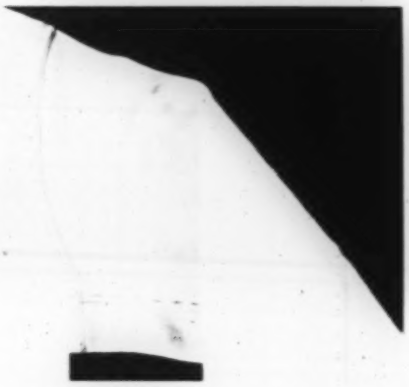


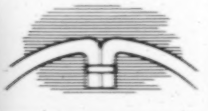
AMERICAN OPTICAL COMPANY

HERE'S WHY ALL AO WELDERS' LEATHERS PROVIDE GREATER PROTECTION . . . FIT MORE COMFORTABLY . . . AND WEAR LONGER

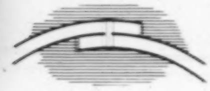
AO Welders' Leathers are built to give you the best possible protection from neck to feet. Compared to ordinary safety clothing, AO garments have many significant advantages. Due to the heavier, higher quality materials used, due to their more scientific design and stronger, sturdier construction, they offer greater protection, they are more comfortable to wear, and they will withstand rougher use and abuse.

Materials. AO protective clothing is made of the highest grade of chrome-tanned cowhide, weighing approximately 5 oz. per square foot — the heaviest weight that can be satisfactorily used. Most of the garments shown in this book are cut from Kip splits — the whole hide of the animal. The fire-resisting duck used for backing weighs approximately 12 oz. per square yard. Fleece lining for gloves and mittens weighs approximately 6 oz. per sq. yd.





Sleeves of ordinary welders' clothing have inseams like this.

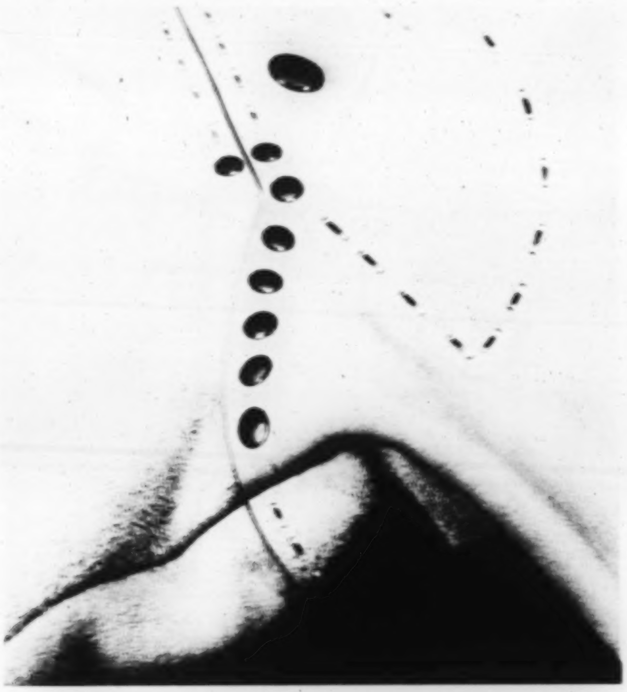


AO welders' coats and capes have *flat* seams like this.

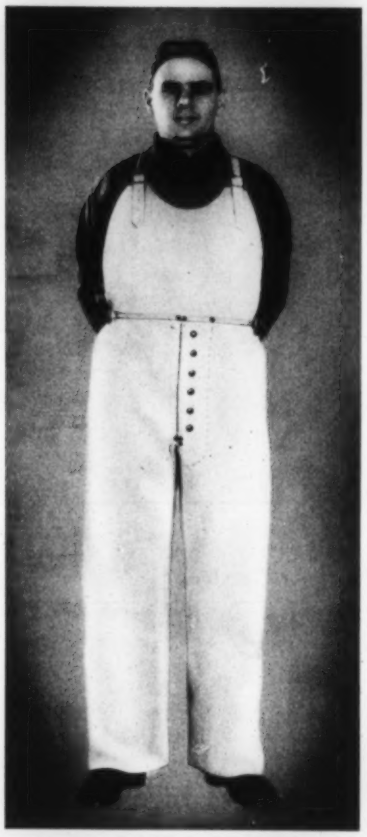
Seams. Welders' Leathers normally wear out or give way at the seams. Due to the wide use of Kip splits, AO Leathers have very few seams, and these few seams, wherever possible, are located well away from the line of fire. All seams are double cotton stitched and reinforced with metal stitching. AO Coats and Cape Sleeves have *flat* seams to prevent irritation and which cause no excessive wear at the elbow. In areas of extra tension and strain, reinforcing rivets provide added strength and longer garment life.

Design. AO Safety Clothing, developed by an expert welder of many years' experience, is made of as few pieces of leather as possible — no unnecessary piecing out, no useless seams. It's designed and constructed to offer maximum protection, fit comfortably, and give long, efficient wear.

Fasteners. AO protective garments are equipped with the finest fasteners obtainable — large, durable snap fasteners. They're easy to open and close, stand up under hard service, and are generously used to insure tight closures.



Crotch. Closely spaced rivets reinforce AO pants and overalls from the inseam of the leg to the fly, strengthening the first area in which *all* trousers usually give way. To prevent sparks from rolling through, the fly has ample overlap and plenty of snaps placed close together.

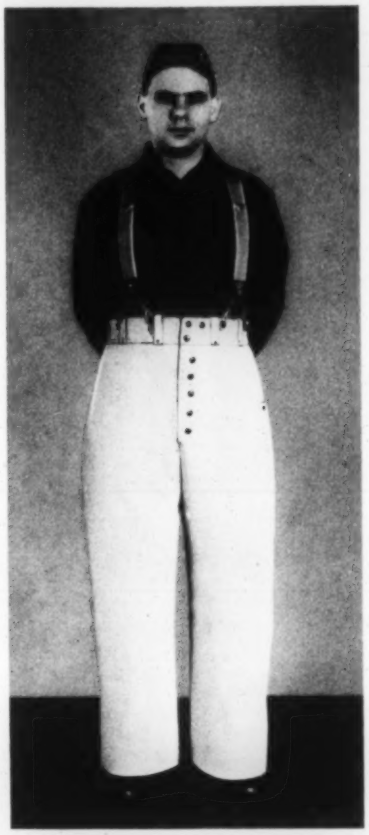


AO No. 207-CL Overalls

AO Overalls provide excellent protection for the operator's legs, stomach, and chest. Trouser legs are 32″ long on the inseam and 24″ wide at the bottom, making them easy to put on and take off over heavy work shoes. Features: an 11″ wire pocket on left leg; one hip pocket with flap; adjustment straps to insure safe, comfortable fit at the waistline; chrome leather shoulder straps with buckles for rapid adjustment.

All seams are double cotton stitched and reinforced with metal stitching. Points of extra tension and strain are reinforced with rivets. For special construction of the crotch, see picture on page 5.

Sizes run in even numbers from 30″ to 46″ waist, inclusive. When ordering overalls, allow 4″ over waist measurement of regular trousers. AO 207-CL Overalls worn with an AO 203-CL Short Jacket provide satisfactory protection for the severest welding jobs. See picture of combination, page 19.

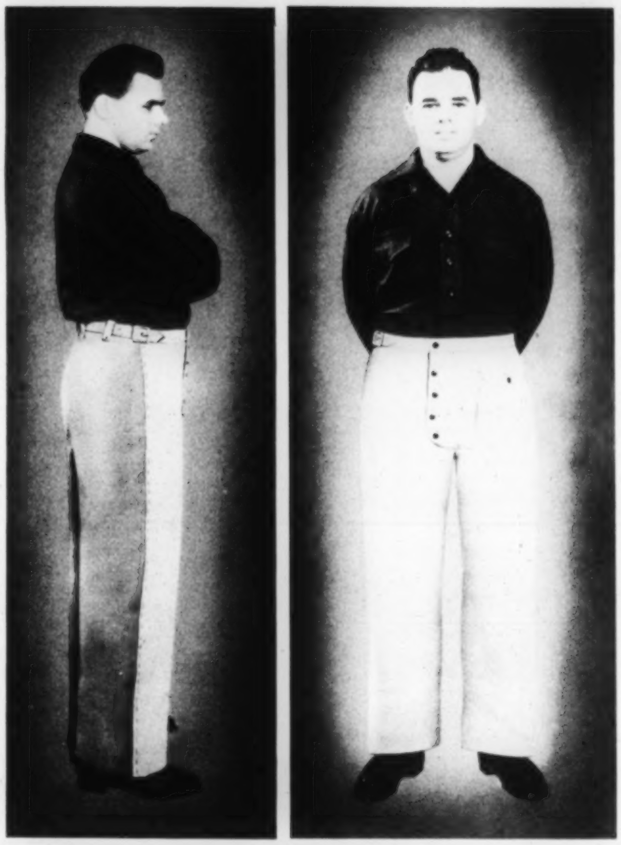


AO No. 205-CL All-Leather Pants

AO All-Leather Pants are made of a few, large pieces of leather. Each leg is made of two pieces of chrome-tanned cowhide, one from bottom to waistline in front, and another in the rear. There are no unnecessary seams. Trouser legs are 32″ long on the inseam and 24″ wide at the bottom, making them easy to put on and take off over heavy work shoes. Features: an 11″ wire pocket on the left leg; one hip pocket with flap; belt loops and suspender buttons at waist.

All seams are double cotton stitched and reinforced with metal stitching. Points of extra tension and strain are reinforced with rivets. For special construction of crotch, see picture on page 5.

Sizes run in even numbers from 30″ to 46″ waist, inclusive. When ordering, allow 2″ over waist measurement of regular trousers. AO 205-CL All-Leather Pants worn with AO 206-CL 26″ Coat provide complete protection for the severest welding jobs. See picture of combination, page 17.



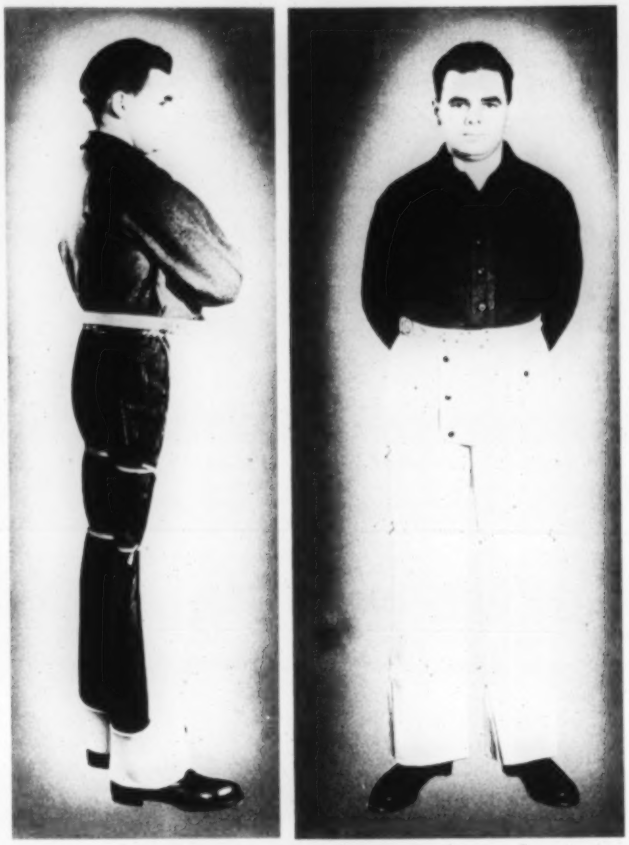
AO No. 2X112 Hot Weather Pants

AO Hot Weather Pants are lighter, cooler, and lower in cost than AO All-Leather Pants. This garment has a full-weight, chrome-tanned cowhide front. The back is made of 12 oz. fire-resisting duck which can be easily and inexpensively repaired or replaced. Trouser legs are 32″ long on the in-seam and 24″ wide at the bottom, making them easy to put on and take off over heavy work shoes. Features: pocket with snap fastened flap on left front leg, and attached belt.

All leather seams are double cotton stitched and reinforced with metal stitching. Points of extra tension and strain are reinforced with rivets. For special construction of crotch, see picture on page 5. Available in four sizes:

Small	30″ to 32″ waist
Medium	34″ to 36″ waist
Large	38″ to 40″ waist
Extra Large	42″ to 44″ waist

This garment worn with AO 208B-CL Cape Sleeves and Bib provides light, cool protection, as illustrated, for hot weather work. See picture of this combination on page 18.



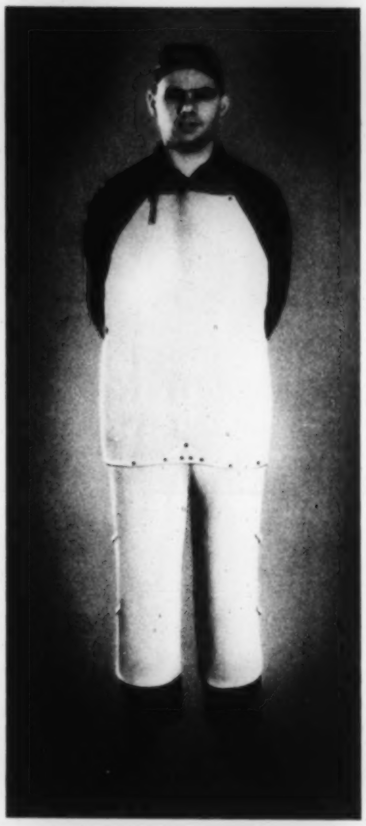
AO No. 210-CL Chaps

AO Chaps provide excellent frontal protection from waist to feet. This garment is ideal for bench work and other jobs where the operator does not have to lie in the fire or avoid sparks from behind. Features: pocket with flap on left front leg, attached, chrome-tanned leather belt, two thongs at the rear of each leg, and full-circle construction at leg bottoms to hold chaps in place.

AO Chaps are available in three sizes:

Small	27″ leg length
Medium	30″ leg length
Large	33″ leg length

THE LIFE OF WELDERS' LEATHERS DEPENDS ALMOST ENTIRELY ON HOW THEY ARE BROKEN IN. SEE PAGE 22.

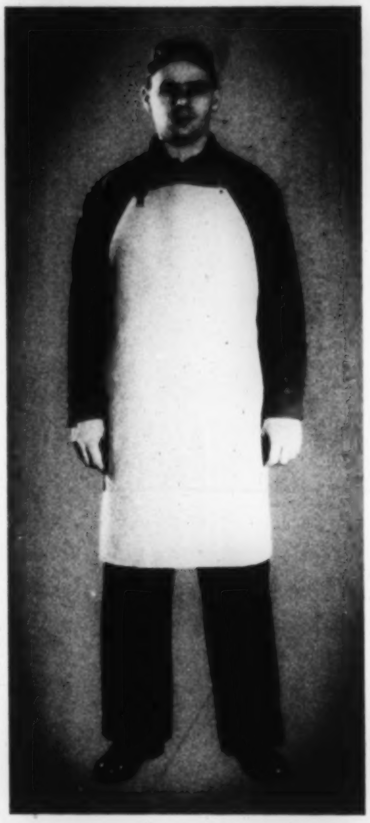


AO No. 2148-CL Split Leg Apron

AO Split Leg Aprons provide satisfactory frontal protection as illustrated. The apron proper is cut from a single piece of the finest chrome-tanned leather, and is 24" wide. The leg protectors are cut from a separate piece of leather, and are joined to the apron by means of a double cotton stitched seam reinforced with metal stitching and rivets. Length of apron plus leg protectors is 48".

A strap with adjustable slide buckle goes around the operator's neck and another one goes around his waist. Two chrome leather straps with adjustable slide buckles hold each leg protector snugly in place. AO Split Aprons are available in four lengths:

Catalog No.	*Measurements*
2130-CL	24" wide x 30" long
2136-CL	24" wide x 36" long
2142-CL	24" wide x 42" long
2148-CL	24" wide x 48" long

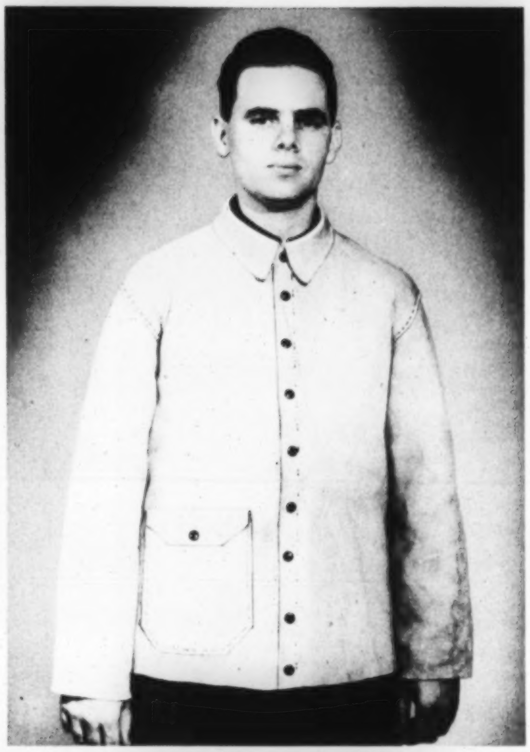


AO No. 136-CL One Piece Apron

AO One Piece Aprons provide reasonable frontal protection as illustrated. This garment is made of a single piece of leather cut from the choicest part of the hide — no seams, no piecing out. Maintenance men working on the lightest welding jobs need the protection at least of an AO Apron — and for a greater measure of safety, one or a pair of AO 209-CL Welders' Sleeves.

A strap with adjustable slide buckle goes around the operator's neck, and another one goes around his waist to hold the garment snugly in place. AO One Piece Aprons are available in four lengths:

Catalog No.	*Measurements*
130-CL	24" wide x 30" long
136-CL	24" wide x 36" long
142-CL	24" wide x 42" long
148-CL	24" wide x 48" long



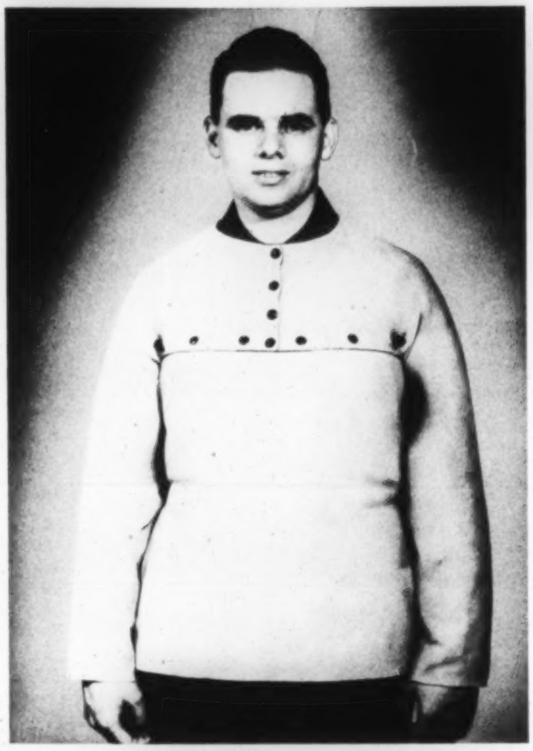
AO No. 206-CL Twenty-Six Inch Coat

AO Twenty-Six Inch Coats provide complete protection for arms and body from neck to well below the waist, both front and rear. The choicest, heaviest leather is used in the two front pieces of the coat and in the sleeves. For special construction of the seams, see page 4. All seams are double cotton stitched and reinforced with metal stitching. Points of extra tension and strain are reinforced with rivets.

Large, durable snap fasteners are closely spaced down the front of the coat to insure tight closure. The coat has an attached, shirt style collar which can be turned up to protect the neck in tough overhead jobs. The cuffs have a snap fastener adjustment to insure snug fit at the wrist, and to enable cuffs to be tucked neatly into welding gloves. Note pocket with snap fastened flap.

AO Twenty-Six Inch Coats are available in even sizes from 32″ to 44″ chest, inclusive. This garment worn with AO 205-CL All Leather Pants provides complete protection for arms and body from neck to feet, front and rear. For picture of this combination, see page 17.

This type of coat in a 30 inch length — for long waisted welders — is also available in even sizes from 32″ to 44″ chest, inclusive. Catalog No. 204-CL.



No. 208B-CL Cape Sleeves and Bib

(PATENT APPLIED FOR)

AO Cape Sleeves and Bibs are becoming very popular among Apprentice Welders. Apprentices like this garment because it is cool to wear, yet provides plenty of protection at remarkably low cost. It is also ideal for maintenance men.

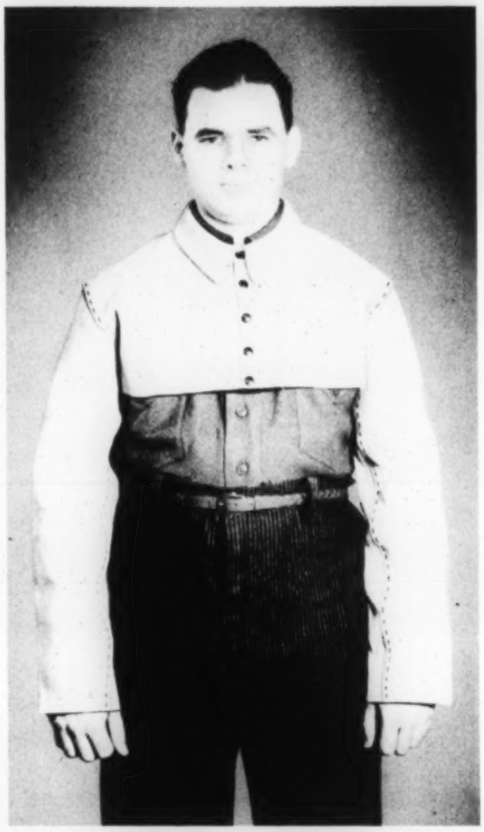
The cape is made of only three choice pieces of leather cut from the heaviest part of the hide. *There are no seams on the exposed side of the garment.* The sleeves have *flat* seams in the back (see page 4), double cotton stitched and reinforced with metal stitching. The ends of seams are reinforced with rivets.

The bib is attached to the front of the cape with heavy, durable snap fasteners across the middle and a suspender button on each end — at the armpit. When the arm is raised over the head, the bib will not come unsnapped at the end.

AO Cape Sleeves and Bibs are available in four sizes:

Size	*Measurement*
Small	30″–34″ chest
Medium	36″–40″ chest
Large	42″–44″ chest
Extra Large	46″–48″ chest

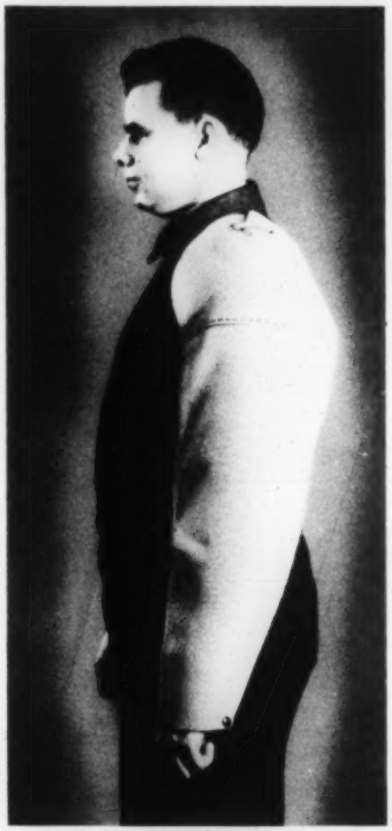
Catalog Number, with Bib: 208B-CL; without Bib: 208-CL. AO Cape Sleeves and Bib worn with AO 2x112 Hot Weather Pants provide complete frontal and shoulder protection as illustrated, from neck to feet — ideal for severe hot weather jobs. For picture of this combination, see page 18.



AO No. 203-CL Short Jacket

AO Short Jackets provide complete protection for arms, neck, chest, and shoulders. The jacket is cut off straight across, covering the operator's chest, armpits, and the upper portion of his back. The shirt style collar can be turned up to protect the neck, making this garment satisfactory for tough overhead welding jobs. The cuffs have a snap fastener adjustment to insure snug fit at the wrists, and to enable cuffs to be tucked neatly into welding gloves. For special flat seam construction, see page 4. All seams are double cotton stitched and reinforced with metal stitching. Points of extra tension and strain are reinforced with rivets.

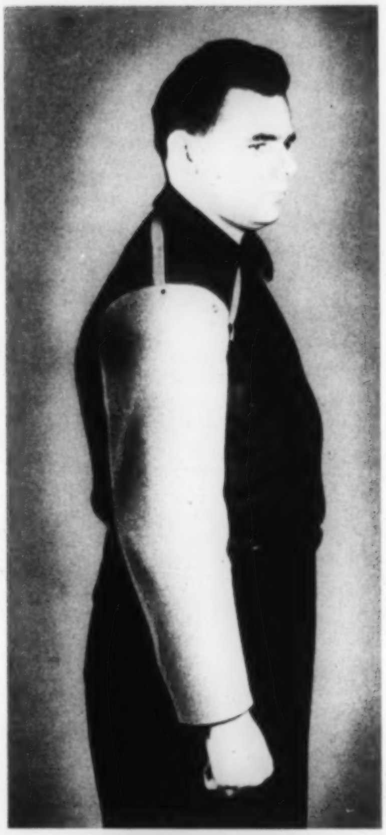
AO Short Jackets are available in even sizes from 32" to 44" chest, inclusive. AO Short Jackets worn with AO 207-CL Overalls provide high grade protection, as illustrated, for severest welding jobs. See picture of combination, page 19.



AO No. 209-CL Welders' Sleeve

AO Welders' Sleeves provide excellent arm and shoulder protection on burning, cutting, down hand welding, and bench jobs. The sleeve itself is made out of a single piece of choice cowhide, and has only one seam — a *flat* seam at the back, double cotton stitched and reinforced with metal stitching. (See details of flat seam construction, page 4.)

The cup shaped shoulder guard is double cotton stitched to the sleeve, with reinforcing metal stitching. A chrome leather thong, running through two metal eyelets, can be tied around operator's neck or across his back to a thong on another sleeve if he is wearing a pair. The cuff has a snap fastener adjustment to insure snug fit at the wrists and to enable cuff to be tucked neatly into the gauntlet of a welding glove or mitten. AO Welders' Sleeves, designed especially for welding jobs, are available in only 23" sleeve length.



AO No. 23-CL Sleevelets

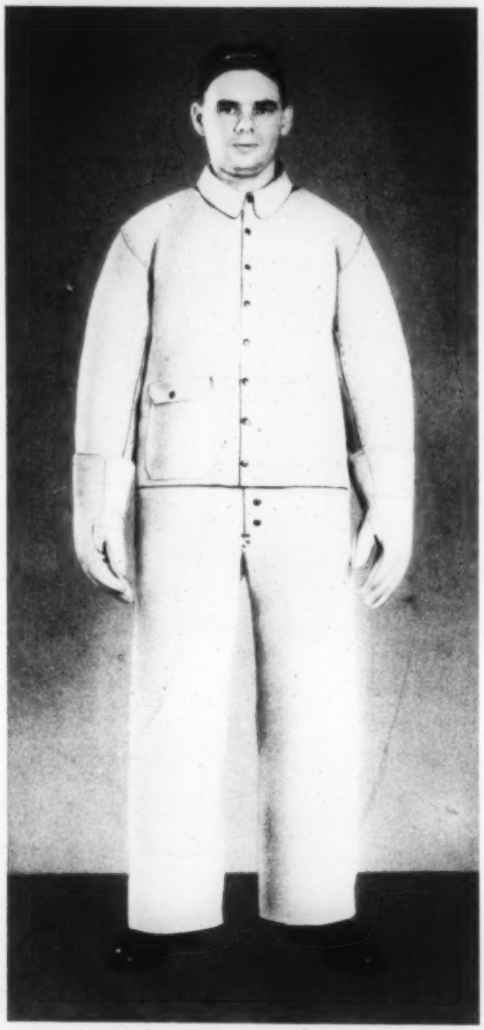
AO Sleevelets provide excellent arm protection. They are more suitable for burners and cutters than for arc welders, but can be used by careful operators for down hand welding and bench jobs.

This garment is cut out of a single piece of choice cowhide, and has only one seam — a *flat* seam at the back, double cotton stitched and reinforced with metal stitching. (Details of flat seam construction are pictured on page 4.)

A strap with snap fastener adjustment extends around the operator's neck to hold the sleeve in place. The cuff also has a snap fastener adjustment to insure snug fit at the wrists, and to enable cuff to be tucked neatly into a welding glove.

In addition to chrome leather, AO Sleevelets are available in fire-resisting duck and asbestos; in four lengths:

Chrome Leather	*Fire-resisting Duck*	*Asbestos*	*Sleeve Length*
23-CL	23-FR	23-AS	23″
18-CL	18-FR	18-AS	18″
14-CL	14-FR	14-AS	14″
12-CL	12-FR	12-AS	12″



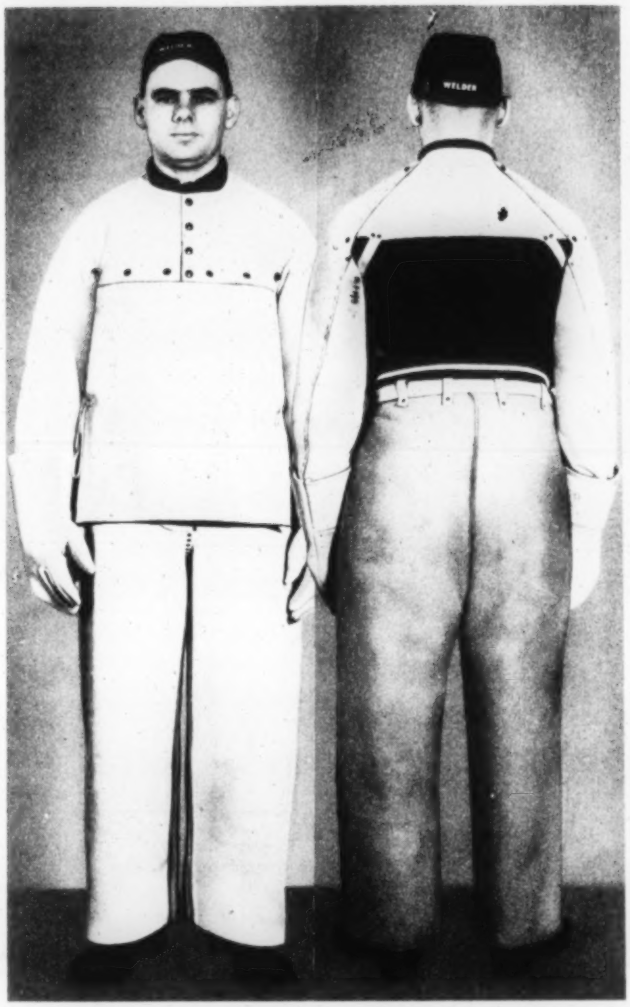
AO Complete Protection Combination

No. 206-CL Twenty-Six Inch Coat

and

No. 205-CL All Leather Pants

This AO *Complete Protection* Combination from neck to feet is recommended for the severest welding jobs. For complete description of the coat, see page 12. For complete description of the pants, see page 7. For complete description of gloves and mittens, see pages 20 and 21.



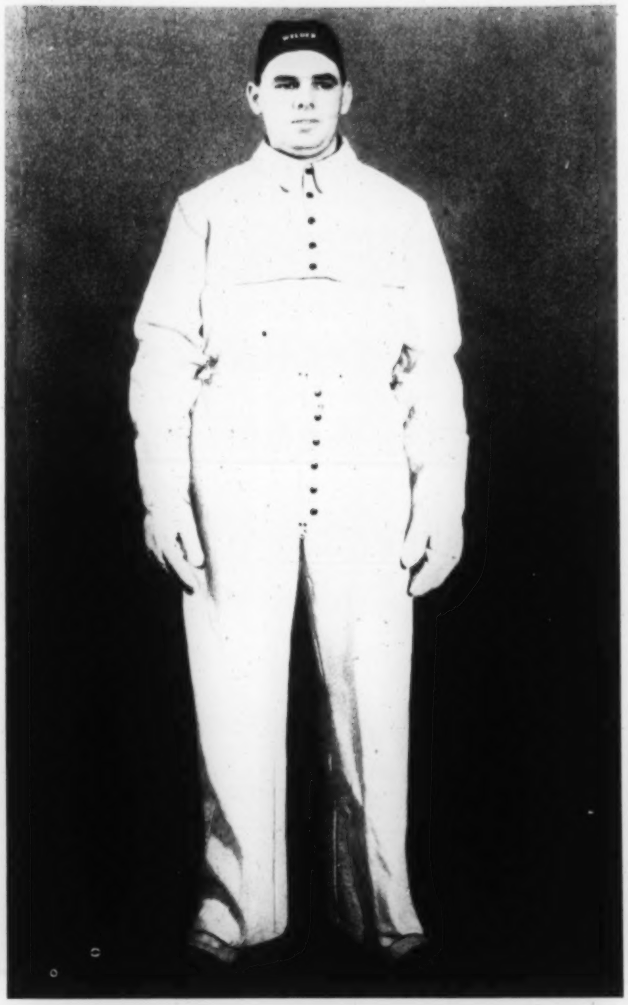
AO Hot Weather Combination

No. 208B-CL Cape Sleeves and Bib

and

No. 2X112 Hot Weather Pants

This AO Combination is light in weight and comfortable. It provides excellent frontal and shoulder protection — ideal for welding in hot climates and in shops where humidity is high. For complete description of Cape Sleeves and Bib, see page 13. For complete description of Hot Weather Pants, see page 8. For complete description of gloves, see page 20.



AO All Leather Protection Combination

No. 203-CL Short Jacket

and No. 207-CL Overalls

This AO Combination provides complete protection from neck to feet, front and rear. The slight ventilation at the sides makes it an excellent combination for warm weather work on the severest welding jobs.

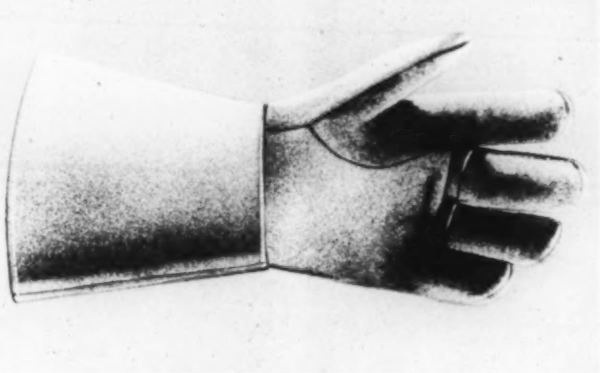
For complete description of the Short Jacket, see page 14. For complete description of the Overalls, see page 6.

AO LINE OF WELDERS' GLOVES AND MITTENS INSURES COMPLETE HAND PROTECTION, PROVIDES COMFORT WITH FLEXIBILITY

. . . and they're built to last!

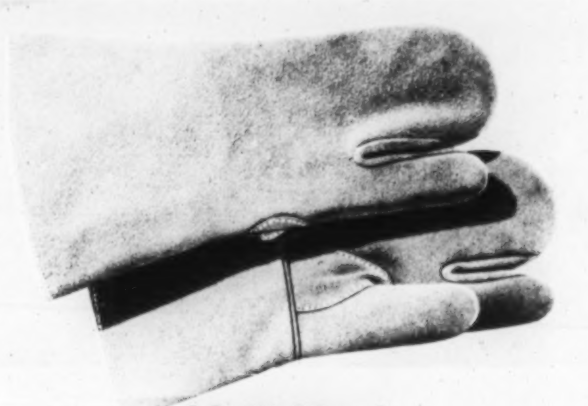
AO Welders' Gloves and Mittens, designed especially for welding jobs, are made of special chrome-tanned cowhide. Cut to generous size, they provide complete hand protection, with comfort and easy flexibility, and they are built to withstand long wear and severe use. To provide a certain measure of stiffness, the cuff has a glued-in lining. Sparks bounce off this stiffer cuff more readily than off a flimsy one.

The backs of AO Welders' Gloves and Mittens are lined with 6 oz. fleece lining that prevents chafing, absorbs perspiration, and gives added insulation against heat. Gauntlets are generous in size so that sleeves can be tucked neatly inside them, thus providing complete protection for the operator's wrist and forearm. Edges of all cuffs are turned in and stitched to withstand heavy wear and use.



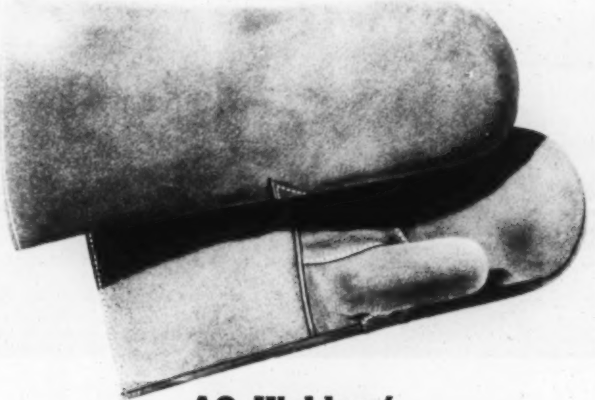
AO Welders'
No. TX-100 Cowhide Glove

AO Welders' Gloves have a gun-cut pattern, which means that they have a one-piece back. The forefinger and thumb are reinforced with an added layer of horsehide.



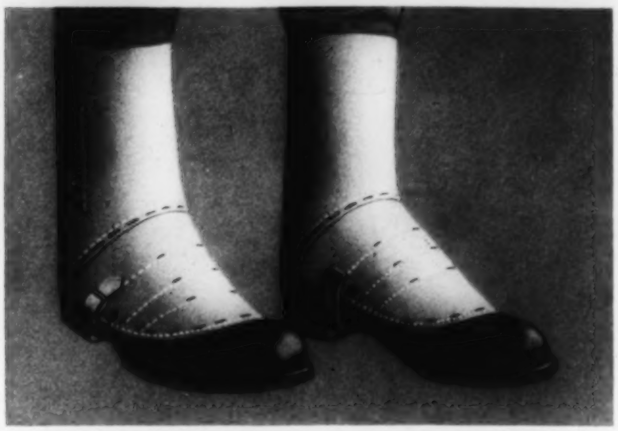
AO Welders'
No. 3003 One-Fingered Mitten

AO Welders' One-Fingered Mittens are generously cut — they're roomy and comfortable. They have a one-piece back construction, and one-piece palm of inseam construction.



AO Welders'
No. 3004 Full Fashioned Mitten

AO Full Fashioned Mittens have fewer seams than any other type of welders' hand protection, and therefore, last longer under severest service. This mitten has a one-piece back and a one-piece palm. A wide leather strap reinforces the base of the thumb, without causing wrinkles to form.



AO Welders' No. 4903-CL Spat

AO Welders' Spats give operators an entirely new sense of confidence and security — no matter how tough the job may be. These spats not only protect the ankles, but also prevent sparks and molten metal particles from rolling down into the operator's shoe tops — even if he is wearing low shoes.

A snap fastener adjustment and steel stays hold the spat snugly on the leg, and make the spat easy to put on and take off. A spring clip and strap hold the flare securely in place over the instep.

Care of Welders' Leathers

Chrome leather is exceptionally vulnerable to molten metal sparks when it is green or new. If an operator will take care to keep out of the line of fire until his garment has become impregnated with dirt and grime, he will find that the garment will last him many times longer. *If a new piece of leather is put directly in the line of fire, it will burn through in a very few days.* The surface of the leather seems to get a glazed finish to it after the leather has become impregnated with dirt, and the sparks bounce off this type of surface much easier than they do when the nap of the leather is raised while the leather is green or new. THE LIFE OF THE GARMENT DEPENDS ENTIRELY UPON HOW IT IS BROKEN IN.

Specifications subject
to change without notice

Moore

Robinson

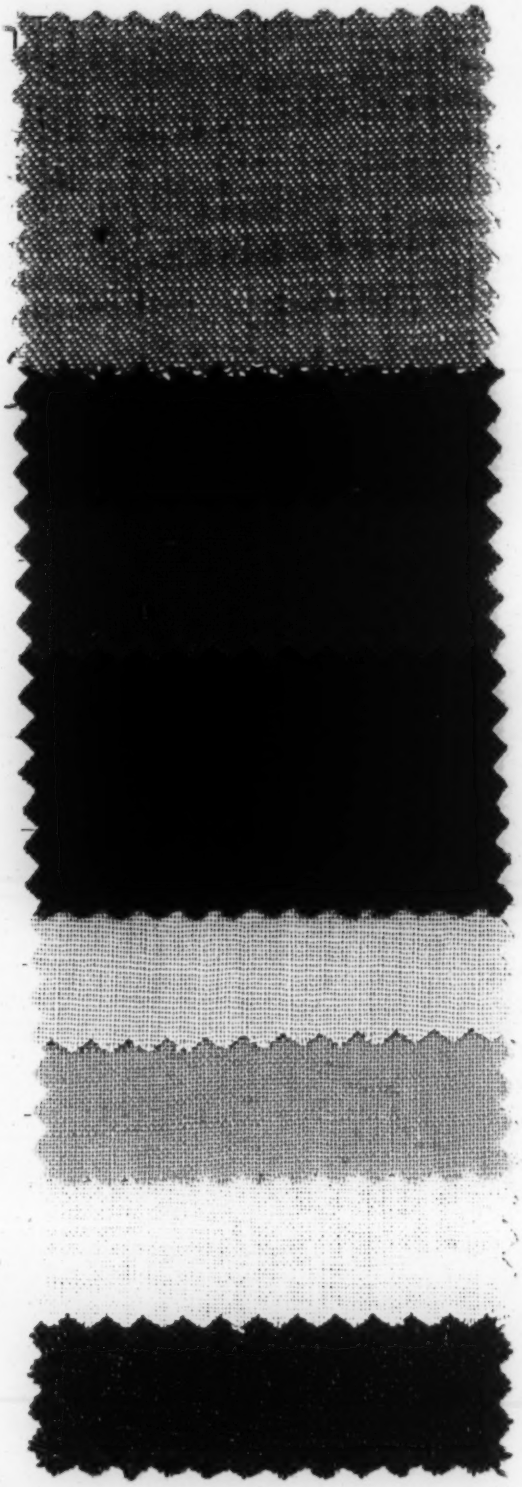
MOORE
Tested Quality
MATERIALS
for
Victory WORKWEAR FOR WOMEN

The sturdy, hard-wearing Moore Materials shown here have all been pre-tested for your protection. To assure you that the fabrics used for Moore Victory Workwear and Headwear are high in quality and will wear well, each has been scientifically tested in the laboratories of the U. S. Testing Company, Inc.

Shown here is their Seal of Quality which signifies approval of this impartial testing company and certifies that Moore materials have been tested by them for hard and satisfactory wear, fast color and washability.

E. R. MOORE *Company*
932 Dakin Street • Chicago 13, Illinois
Wellington 3424

SEE BRIEF DESCRIPTION OF THESE MATERIALS ON NEXT PAGE



No. 59
Sport Denim
Sentry Blue

No. 59
Sport Denim
Navy

No. 66
Gymcloth
Swing Blue

No. 66
Gymcloth
Navy

No. 66
Gymcloth
Rio Red

No. 66
Gymcloth
Coral

No. 66
Gymcloth
Green

No. 66
Gymcloth
White

No. 57
Oxford Twist
Airline Blue

No. 51
Gabardine
Navy

No. 55
Corvette Twill
Cadet Blue

No. 52
Fortress Twill
Navy

No. 88
Aerocloth
White

No. 81
Drill
Blue Tweed

No. 60
Midway Suiting
Flight Blue

No. 60
Midway Suiting
Navy

No. 60
Midway Suiting
Pacific Blue

No. 53
Service Twill
Navy

MOORE MATERIALS

☆

No. 59 Sport Denim—Sturdy, all-cotton material unusually long-wearing and popular for work clothes. Sanforized.*

No. 66 Gymcloth — of 100% cotton, made especially to Moore specifications. Strong, well-wearing yet light in weight. Vat-dyed and Tru-Shrunk (will not shrink more than 2%).

No. 57 Oxford Twist — Woven from 15% rayon and 85% cotton. Strong, long-wearing and softly draping. Sanforized.*

No. 53 Service Twill—Durable, attractive all-cotton cloth, a real value for work clothes. Sanforized-shrunk.*

No. 60 Midway Suiting—Fine, all-cotton fabric with a firm, uniform weave and smooth finish. Vat-dyed and Tru-Shrunk (will not shrink more than 2%).

No. 81 Tweed Drill—A closely woven all-cotton fabric, long-wearing and protective. Sanforized.*

No. 88 Aerocloth — A handsome, closely woven material with a fine, lint-free finish. Will wear exceptionally well. Sanforized.*

No. 52 Fortress Twill—An all-cotton smooth-finished fabric which assures comfort and good-appearance throughout long, hard wear. Sanforized.*

No. 55 Corvette Twill — One of our finest fabrics, closely woven to protect the body against dust, dirt and fumes. Lint-free finish guards against damage to precision instruments. Vat-dyed and Sanforized-shrunk.*

No. 51 Gabardine—This all-cotton fabric excels in good looks and hard wear. Washable —Sanforized-shrunk* for permanent correct size.

**Will not shrink more than 1%.*

For Prices . . . See *Attached Price List*

FOR IMMEDIATE RELEASE

THE LEHIGH SAFETY SHOE CO., Inc.
Allentown, Pa.

NEW ... LEHIGH "TOE-SHIELD"*

SAFETY SHOES for WOMEN IN INDUSTRY

12 to 17 million industrial workers are needed to build the 40 billion dollars worth of armaments on this year's war-program. But that many men simply won't be available. So, in addition to the 4 million women who are already speeding America's war effort, industry is now making plans to hire additional millions of women for jobs where women never have been thought of before!

Even among skilled workmen, however, and under more leisurely peacetime conditions, ONE OUT OF EVERY FOUR industrial accidents injures someone's feet or toes. And in many of the largest industries it has long been compulsory for workmen to wear special steel-toe'd safety shoes that prevent foot and toe injuries when accidents do happen.

Such protection is even more essential for the millions of women who are new to industry, because they know far less than regular industrial workmen about protecting themselves from injury on the job. And it is made available, for the first time, in the new "Toe Shield" safety shoes shown in the accompanying photograph.

These are made in one style only ... a black elk or calfskin oxford with a double, thermoplastic toe box under the leather tip. This is lighter and more comfortable than the steel toe box used in men's safety shoes, and gruelling tests have proved it plenty strong enough to withstand the impact of any falling tools or equipment normally handled by women.

It is built over a time-tested nurses' shoe last that fits most feet in complete comfort; has a durable oak leather sole and can be resoled when necessary; a comfortable, walking-height heel with composition lift. Fibre pegs instead of nails in the lift, and fibre tips on the laces eliminate the possibility of dangerous sparks for wear in munitions plants.

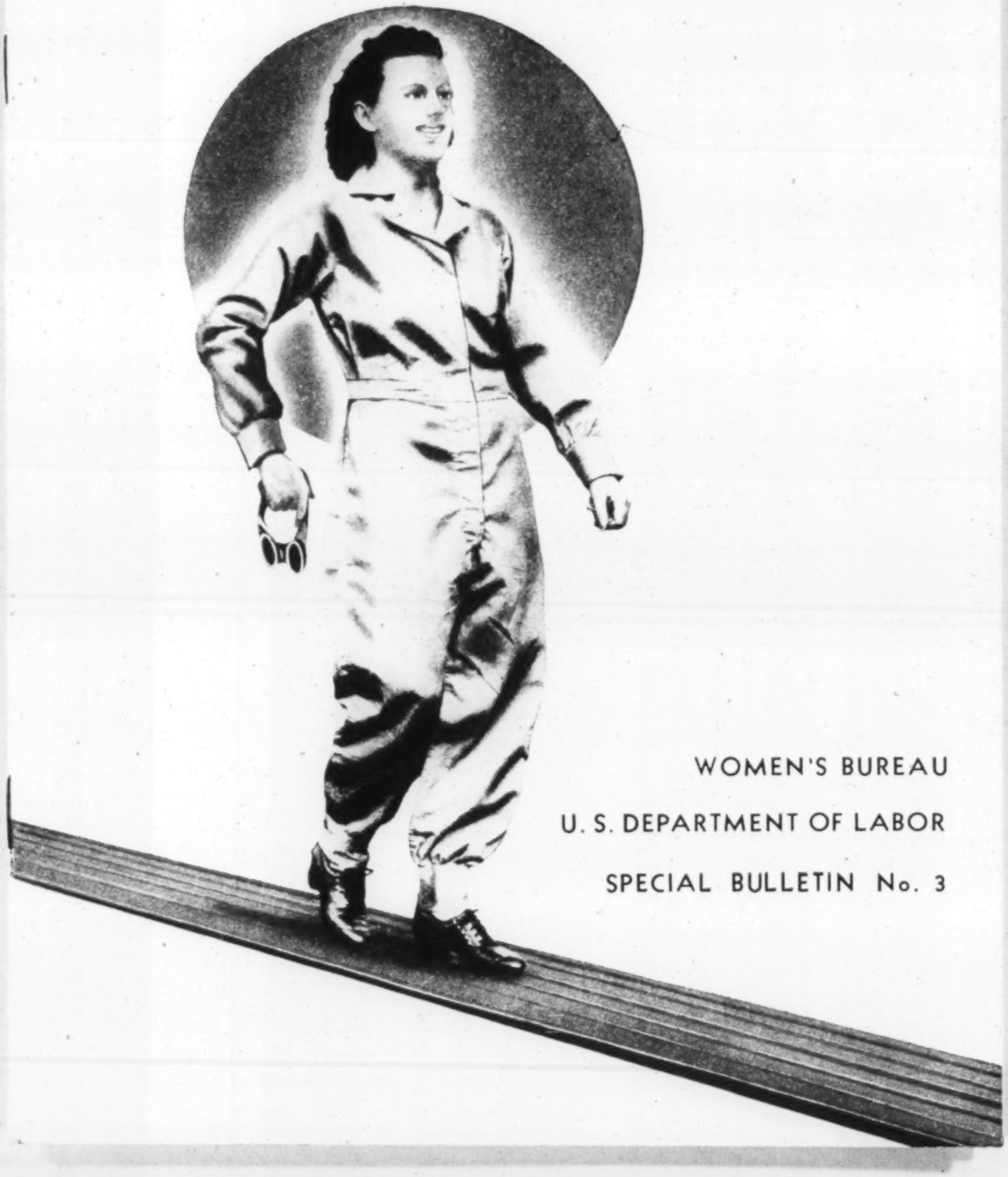
This shoe already is worn by several hundred women workers of one of the country's largest aircraft factories, and will be offered to employees by several other major war industries as quickly as women begin to replace men in their factories.

The shoe is not sold through retail stores, but is available only direct from the Lehigh Safety Shoe Co., of Allentown, Pa., or through the safety department of any factory.

*Reg. U. S. Pat. Off.

Please credit "Lehigh Toe-Shield" safety shoes where photograph is reproduced.

SAFETY CLOTHING FOR WOMEN IN INDUSTRY



WOMEN'S BUREAU

U. S. DEPARTMENT OF LABOR

SPECIAL BULLETIN No. 3

UNITED STATES DEPARTMENT OF LABOR
FRANCES PERKINS, Secretary

WOMEN'S BUREAU
MARY ANDERSON, Director

◆

Safety Clothing for Women in Industry

Special Bulletin No. 3 of the Women's Bureau

United States
Government Printing Office
Washington : 1941

For sale by the Superintendent of Documents, Washington, D. C. - - - - - - - - - Price 10 cents

Letter of Transmittal

United States Department of Labor,
Women's Bureau,
Washington, May 23, 1941.

Madam: I have the honor to transmit herewith a report on safety clothing for women workers, constituting the third in the series of special bulletins for the employment of women in the defense program.

The research and the writing of this report are the work of Margaret T. Mettert of the Bureau's Research Division.

Respectfully submitted.

Mary Anderson, *Director.*

Hon. Frances Perkins,
Secretary of Labor.

Courtesy American Mutual Liability Insurance Co.

SAFETY CLOTHING FOR WOMEN IN INDUSTRY

The well-dressed woman in industry is a safe worker.
Clothing suitable to the job helps to avoid accidents.
Consider your feet first.
Wear your goggles; you can't replace an eye.
Wear a cap around moving machinery.
Work dress must suit the job to be safe.
Hand coverings can prevent skin infection and other injury.
Jewelry has no place in the factory.
Jobs with special dangers require special kinds of work clothing.

★

The Well-Dressed Woman in Industry is a Safe Worker

Safety clothing is designed for its attractiveness as well as its utility. It has become fashionable to dress and act so that accidents cannot happen. The girl who was afraid to carry a mirror lest she bring bad luck by breaking it has become the girl who knows that accidents have definite causes that can be avoided.

Clothing Suitable to the Job Helps to Avoid Accidents

Safety conventions have so far recognized the importance of safe clothing that they have included on their programs "fashion parades" (see frontispiece) of clothes designed especially for industrial women. Designers have in mind first safety, then convenience, wearability, comfort, cleanliness, and coolness. Attractiveness is given due consideration.

In selecting the material for uniforms it should be borne in mind that lightly starched fabrics are said to be more resistant to fire than are fabrics without starch, and that cellulose fabrics are more inflammable than cotton.

Safety clothing of various types has saved many thousands of workers from permanent crippling, disfigurement, or blindness, and many more from time lost from work and weeks of pain and illness.

Consider Your Feet First

Much fatigue and nervousness can be laid to badly fitting shoes. If you suffer from chronic fatigue or pain in your feet or in the muscles of your legs, ask the plant physician or nurse to advise you about the right kind of shoes to wear.

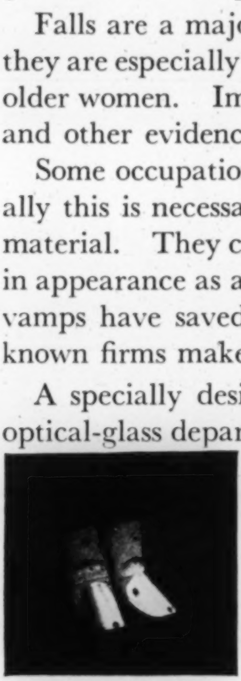
The correct shoe is long enough to place the ball of the foot in the tread of the shoe. The shoe allows for the natural spread of the toes, and fits snugly around the heel and instep. The heel is medium or low. The foot should always be measured with the standing weight placed on the measuring rule. The width should be fitted as carefully as the length. If deformities exist, exercise and mechanical devices will help.

High or run-down heels and thin or worn soles can be the direct cause of a fall. Well-fitting shoes with low heels and good soles can help to maintain footing on wet or slippery floors.

Falls are a major cause of women's injuries in industry; and they are especially serious, and result in much loss of time, among older women. Important causes of falls are wet, slippery floors and other evidences of poor factory housekeeping.

Some occupations require the wearing of safety shoes. Usually this is necessary if there is any danger of dropping heavy material. They can be as comfortable to wear and as attractive in appearance as an ordinary shoe. Such shoes with reinforced vamps have saved the loss of many toes. Several nationally known firms make them in all sizes for both men and women.

A specially designed foot protector for girls working in an optical-glass department is shown in figure 1. Made of chrome leather, it has a piece of aluminum curved to fit the top of the foot. This is protection to the instep and top of the foot against falling glass or other falling objects. Where workers handle acids, or where conditions of great heat or moisture exist, wooden-soled shoes have been designed.



Courtesy Pittsburgh Plate Glass Co.

Fig. 1.—Foot protector for girls in glass manufacture.

Women who work where explosives are manufactured or handled must wear shoes with sewed or wooden-pegged soles and heels with copper nails.

Wear Your Goggles—You Can't Replace an Eye

Wear an approved safety goggle in all work even remotely hazardous to your eyes. Accidental eye losses cost industry about 50 million dollars a year. They cost each worker who loses an eye his most precious possession, his sight. In New York alone almost 2,000 workers a year suffer eye injuries severe enough to make them eligible for compensation benefits. The most frequent cause is flying bodies. Other causes are tools or machine parts and splashing liquids. No one can tell when or how an eye accident will happen, and precautions should be taken.

Goggles are made in lightweight comfortable frames to wear by themselves or to fit over prescription glasses. There was a time when goggles were crude because a glass had not been produced that could stand heavy blows. Now glass can be so tempered that it will not shatter from any blow.

One company mounts on a bulletin board each pair of broken goggles and the object that broke them. Most of them come from men and women on jobs where the operation does not seem dangerous to the eyes. At least one large manufacturing concern requires goggles on every job, and visitors must put them on before entering the plant. This company saved itself $116,000 in 2 years by this requirement. More important, it saved at least 100 eyes in a period of 10 years.

Among the jobs where goggles should be used are upholstering and sewing-machine and grinding operations. Goggles have saved more than one eye from broken needles in sewing occupations.

Wear a Cap Around Moving Machinery

In a Government arsenal employing many women the statement was made recently in answer to a Women's Bureau inquiry that a woman's hair is the greatest hazard in her employment on machinery. It is possible for the electrical attraction in moving machinery to draw free hair into the machine (as a brush draws the hair after brushing), with very terrible results. For this reason a net should be worn or the hair should be cut short.

After years of experiment a company employing many women at work with revolving machines, and some in dusty operations, has decided on a uniform head covering, attractive in appearance as well as efficient in protection.

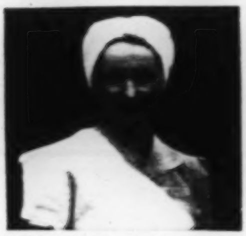
Two problems are present—confining the loose hair and preventing the possibility of revolving machinery catching in the hat and then in the hair. The distinctive features of the cap decided on are its height (the top does not touch the girl's hair) and its stiffness (it will not catch in revolving machinery). The head size is not small, so the hat would be thrown off if a girl did strike a piece of machinery. One girl, after wearing it at her machine operation for several days, remarked that she never before had realized how close she was working to her machine. The touch of the cap warned her she was too close.

Wearing a net to cover all the hair and hold it close to the head may be necessary where a girl has a lot of hair and the hat does not entirely cover it.

In this company the management arrived at the best solution to its hat problem by cooperating with the girl at the machine on questions of design, material, and comfort. Suggestions for such a uniform headdress can be given by the workers after the problem is outlined to them.

After careful consideration, the National Youth Administration has adopted a cap for its girl employees in factory work. This cap is visored to shade the eyes, is full so that all the hair may be covered. It is light, comfortable to wear, and washable.

In jobs where dust of any kind is present, and they are many, a well-fitting cap of closely woven, easily laundered material adds to comfort and health. The head covering in figure 2, designed to protect the hair and scalp from soda bicarbonate used in certain operations, is made of white batiste in the shape of a triangle and hemmed on all edges. Wrapped around the head and tied in front, it furnishes complete protection.



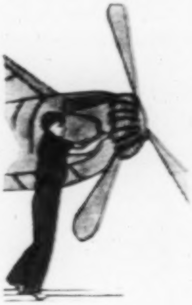
Courtesy Pittsburgh Plate Glass Co.

Fig. 2.—Head scarf for protection against harmful dusts.

Work Dress Must Suit the Job To Be Safe

The time has passed when clothes selected for the Easter parade may eventually become work clothes, no matter how unsuitable. Tight-fitting garments cause strain that increases fatigue. Loose, full dress around moving machinery invites serious injury.

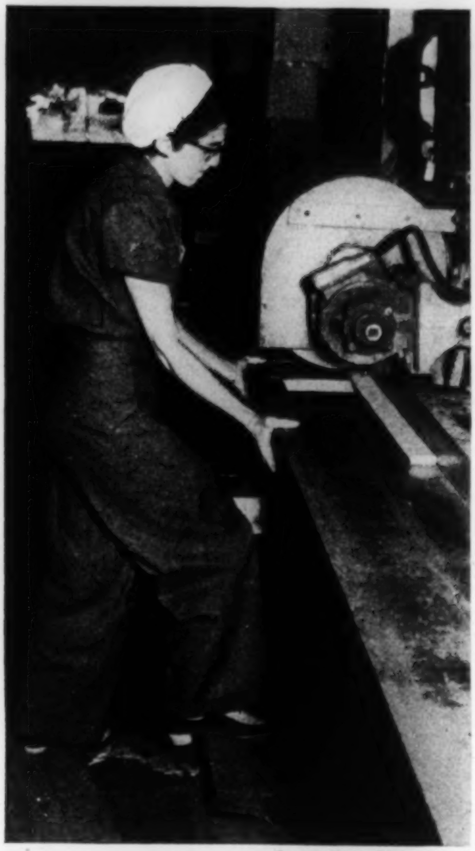
The girl working in airplane repair should wear slacks and blouse with short cuffless sleeves, or short-sleeved coveralls, to give freedom of movement without danger of catching on protruding equipment.



A similar uniform is necessary for the woman working near any moving machinery. It may be slacks and blouse, coveralls, or one of the various types of knicker suits that have been designed. The important things to remember when dressing for work at or near moving machinery are no loose sleeves, no full skirts, no ties or frills to catch in moving parts. (See frontispiece.) Both slacks and sleeves should be made without cuffs. Long sleeves rolled up are even more to be shunned than cuffs; the loose roll caught in a machine is most resistant to tearing and a serious arm injury may result. Pockets are to be considered, too, and no outside pocket at all is the safest rule. If an outside pocket is necessary, the Bureau of Home Economics advises a flat-seamed pocket or flat hip pocket.

On bench assembly work and other factory work without special hazards, either a simple well-fitting short-sleeved dress or slacks and blouse like that in figure 3 are appropriate. Freedom of movement spells comfort and efficiency in any work. Pleated backs in blouses and well-cut garments contribute to freedom.

A special dress for work is necessary, too, where there is dust or other soiling agent. Protecting the street clothes of men and women working with chlorinated naphthalene in the manufacture of insulated wires and electrical condensers was found essential to prevent cases of serious skin eruptions to young children and other members of the workers' families. Uniforms highly starched prevented absorption of the poison. In case of any poisonous dusts, exposure time is doubled by carrying the poison around on street clothes.



Courtesy National Safety Council.

Fig. 3.—Well-cut slacks and blouse spell comfort and safety while working near machinery.

With some materials skin contact is known to be a more important cause of poisoning than respiration or digestive contact. Street clothes must never be contaminated by such materials.

For the comfort of women who must work in cold places a ski type of trousers has been devised of warm material, fitting well about the ankles and topped by a closely knitted sweater.

Hand Coverings Can Prevent Skin Infection and Other Injury

Work gloves must be chosen for the job in which they are to be used. They must be comfortable and durable, as well as protective. Gloves are more than a decorative accessory for the woman in industrial work. Protection of the fingers and hands can go a long way in cutting down the number of injuries to women. Hands and fingers are used in practically every operation connected with earning a living. Even a slight accident to the fingers can completely disable a worker for the occupation that requires nimble fingers and accurate handling of small parts. According to some State reports, approximately half of all occupational injuries to women affect hands and fingers. Gloves can furnish adequate protection in many cases.

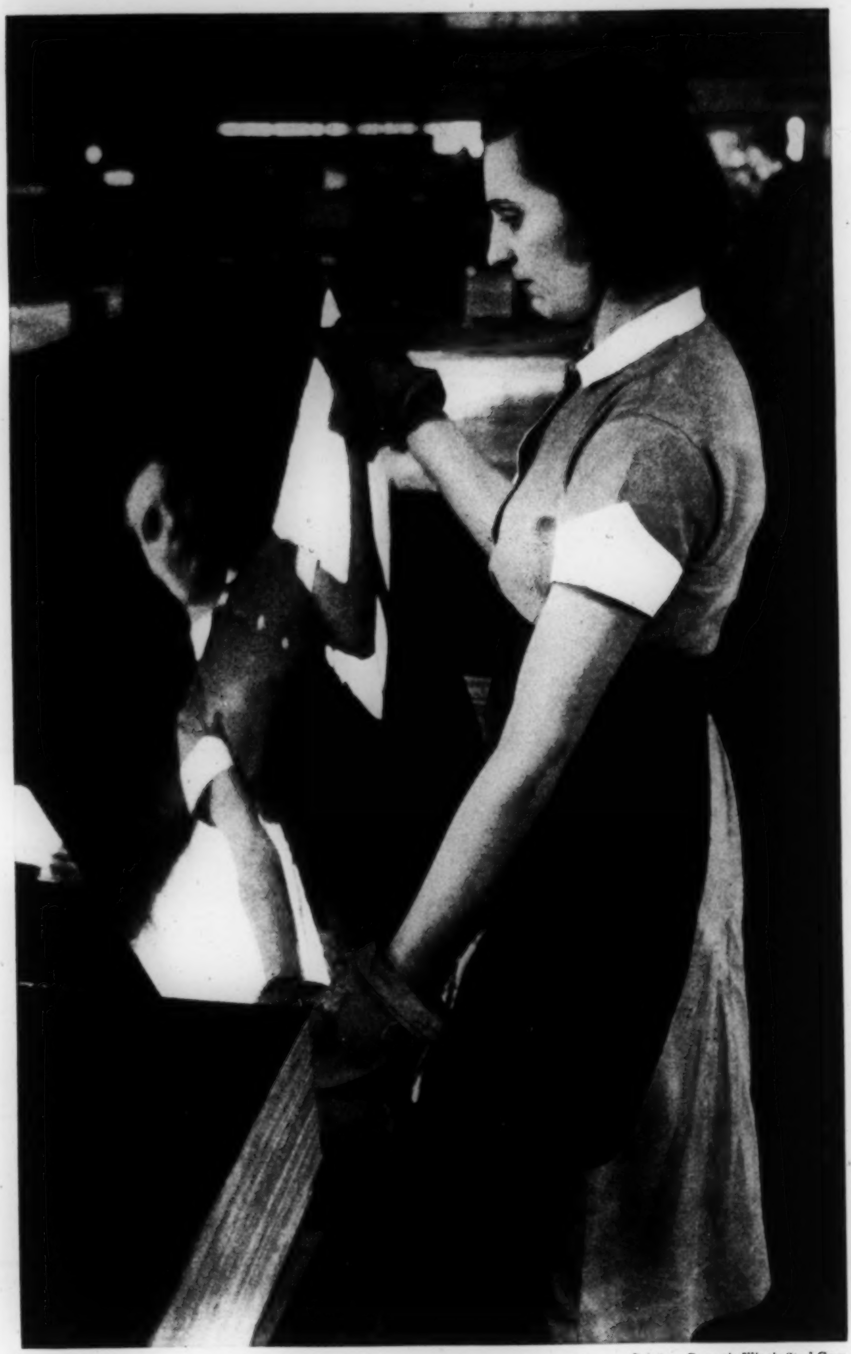
Much assembly work requires handling sharp or rough objects. An ordinary durable glove of inexpensive type will mean comfort and safety in this kind of work. Where the parts handled are small, rubber finger guards may be sufficient. Adhesive tape so often seen around the workers' fingers is a poor substitute, since its constant use has a harmful effect on the skin and may even be the cause of a definite irritation.

An operator handling sharp particles wears hand protectors of leather such as goatskin to protect her hands from the minute chips. Rubber finger guards are worn to make it easy to handle the small parts.

Figure 4 illustrates the need for gloves in another operation at which many women work—inspection of tin plate.

Hands are most often affected by the skin diseases caused by a great variety of substances used in industry. Gloves made of fabrics that absorb moisture may become so saturated with the harmful substance that they are worse than no gloves.

The United States Public Health Service has studied fabrics to find satisfactory protection against such harmful materials. As a result they recommend as the most suitable protection against skin irritants Pliofilm, Vinylite, and Koroseal. These materials prevent the irritants from coming in contact with the skin and they have the advantage of not being inflammable.



Courtesy Carnegie-Illinois Steel Corp.

Fig. 4.—Leather gloves and apron used in tin-plate inspection.

They are easily washed with soap and water. With ordinary care they will last for months in rough occupations. In gloves they have an elasticity like rubber, without the clammy feeling of rubber. They can be used where rubber would be attacked by the chemicals used, or where the worker is allergic to rubber itself. Rubber has other disadvantages, aside from its uncomfortable feeling; it is heavy, tears easily, and may cause dermatitis in susceptible workers.

Protective hoods, sleeves, gloves, and aprons of this type of material may be worn. Sleeves should fit snugly over the gloves so that wrists as well as hands are protected. Such protection is especially helpful where objects are lifted above shoulder level and may run down onto the forearm, or where material may collect on the edge of the glove and be rubbed into the wrist.

Gloves used in working should be considered carefully from the point of view of comfort. Leather gloves particularly should be checked for heavy rough seams or rough edges. Continual irritation of the skin opens the way for infections.

Gloves are used more than any other single item of protective clothing, but around moving machinery a glove is as taboo as a necklace or a ring. Serious accidents have been caused by wearing gloves while operating drills, punch presses, lathes, and other machines. It is a temptation to wear gloves because of the frequent contact with oil and greasy objects. Substitute protection is available for such occupations in the creams and varnishes on the market. No one cream or varnish is suitable protection for all substances, and the best method is to use the specific type of protection advised for each general group of irritants. In many cases pure lanolin or a cream with a lanolin base is adequate. Examples of mixtures requiring special protection include chlorinated solvents, gasoline, chemical mixtures; turpentine; alcohol; turpentine and hydrosolvent mixtures. For such mixtures advice about the protection to use should be given by the plant physician.

An important consideration when a cream or varnish is used for protective covering is that it may be washed off with a suitable soap cleanser.

Jewelry Has No Place in the Factory

No jewelry is suitable for factory wear. The useful wrist watch, the frivolous earrings, necklaces, rings, and bracelets, though attractive in themselves, have no place in the factory. Some companies make definite rules that no visible jewelry may be worn.

Jobs With Special Dangers Require Special Kinds of Work Clothing

Safety clothing now provides protection against almost any hazard in any type of work. The worker dressed specifically for her job is safety conscious and less likely to have an accident.

The following list indicates the particular personal equipment necessary in cases of exposure to the hazards listed:

If the hazard is—	*The worker should wear* [1]—
Corrosive substances, alkalies, or acids.	Coat or apron of rubber; rubber or chrome leather shoes with wooden soles and, in case of corrosives, with sewed sole; arm and leg protectors of glass-fiber cloth; fiber-metal alloy, or rubber; gloves of rubber or rubberized cotton; rubber hat or hood.
Cuts	Chrome leather is advised for coat, apron, shoes, leg and arm protectors, and gloves. Metal mesh may be necessary in apron and in arm and leg guards, and gloves may be of canvas, metal mesh, or cotton. Head covering may be of plastic composition, duralumin, or vulcanized fiber.
Dermatitis	Clothing of rubber. May necessitate coat or apron, shoes, arm protectors, gloves.
Falling objects	Shoes with reinforced toes; arm and leg protectors of fiber-metal alloy; head covering of plastic composition, duralumin, or vulcanized fiber.
Falls or slips	Shoes with nonskid soles.
Flying particles	Same as for punctures and blows (which see) with the exception that shoes with reinforced toes and metal-mesh or cotton gloves are not necessary, and in some cases an asbestos coat or apron would be preferable to one of leather.

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[1] Where rubber is listed, one of the substitutes such as discussed on page 7 may be used.

If the hazard is—Con.	*The worker should wear*—Continued
Hot liquids	Apron or coat of chrome leather; shoes opening at the side and made of chrome leather; leg and arm protectors of fireproofed duck; asbestos or chrome leather gloves; rubber hat or hood.
Hot materials	Asbestos coat or apron; wooden-soled, chrome leather shoes without front lacing; asbestos arm or leg protectors, gloves, and hat or hood.
Moisture	Rubber coat or apron; chrome leather or rubber shoes; arm and leg protectors of chrome leather or rubber; gloves of rubber or rubberized cotton; hat or hood of rubber.
Punctures and blows; rough, sharp, objects.	Chrome leather shoes with reinforced toes; coat or apron of chrome leather or wire mesh; leg and arm protectors of leather or fiber-metal alloy; gloves may be chrome leather, metal mesh, or cotton; necessary head covering of plastic composition, duralumin, or vulcanized fiber.
Spark explosion	Shoes with sewed or wood-pegged soles, copper-nailed heels.

Leg protectors include spats, leggings, pants, knee pads.
Arm protectors include sleeve and wrist protectors.
Gloves include also mittens, hand pads, finger guards.
Hats include hoods.

(*Material in this list adapted from chart by the American Mutual Liability Insurance Co.*)

NEW

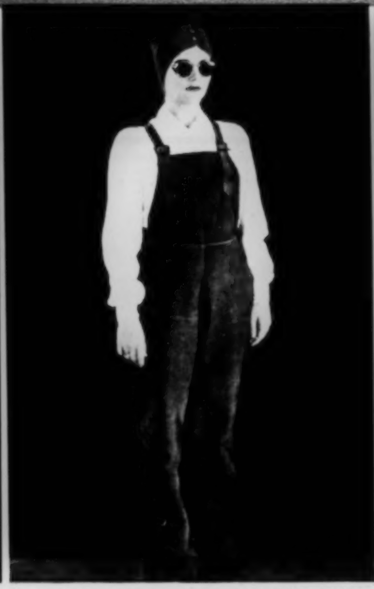
AO Protective Clothing Especially Tailored for Women Welders

MADE OF SELECTED MATERIALS .... SHAPED FOR COMFORT .... SMARTLY STYLED

Now women can obtain welders' leathers that not only offer adequate protection but also fit snugly and comfortably, look smart, and withstand severe use and abuse. Every garment in the new AO line of Tailored Protective Clothing has been styled according to dressmaker patterns. As a result, these leathers permit free and easy movement of the body, enabling women welders to turn out more and better work—with less fatigue. Expert design also adds notably to garment life . . . especially in the sleeves, at the waistline and across the shoulders.

AO Tailored Protective Clothing is made of specially selected chrome tanned cowhide. It is as light in weight as possible, consistent with adequate protection. Get in touch with your nearest AO Branch Office for further details.

Tailored Short Jacket with Tailored Split Leg Apron— Soft, comfortable, lightweight, yet affords positive protection.



Tailored Overalls — Styled like women's slacks with bib and shoulder straps, and side placket to insure trim, comfortable waist line.

Tailored Cape Sleeves and Bib— Permits easy freedom of arm movement, provides excellent shoulder, arm, and frontal protection.

Tailored Coat—Smartly cut, with shaped sleeves and tucks running down from shoulders.

American Optical
COMPANY
SOUTHBRIDGE, MASSACHUSETTS
World's Largest Manufacturer of Ophthalmic Products

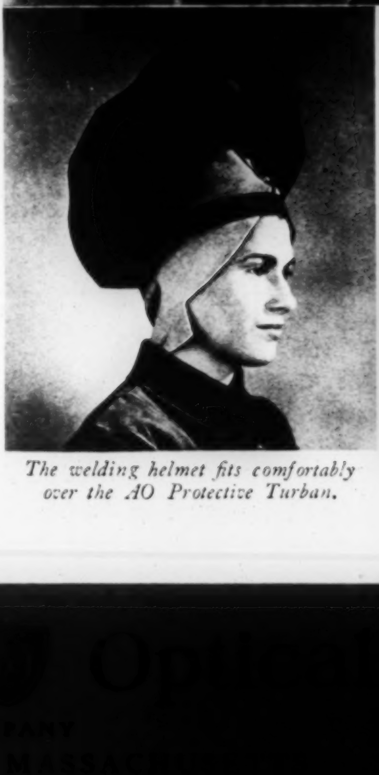
THE NEW

PROTECTIVE TURBAN for WOMEN WELDERS

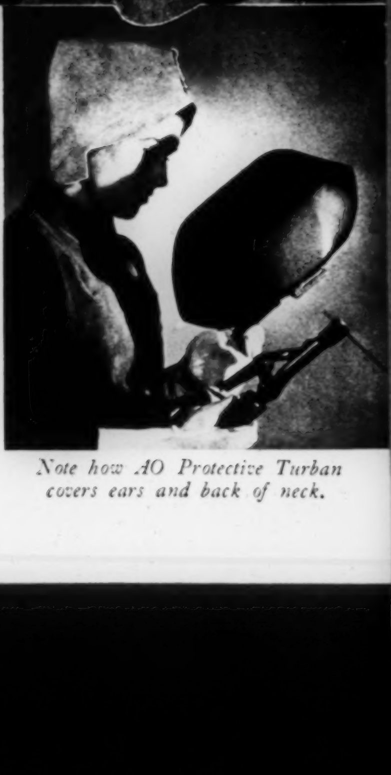
Styled by John Fredericks

Here's the protective turban that women welders have been demanding ever since they took up the wire and holder. It's practical, comfortable to wear—with or without helmet—provides protection against flying sparks, holds the hair snugly in place, yet it's smartly styled—a creation of John Frederics, New York. Note these 7 advantageous features:

1. **Comfortable to Wear**
   Designed for comfort *underneath* a welding helmet—without alterations.
2. **Leather or Cassimere**
   Offered in lightweight gray or brown leather—chrome tanned, and also in pin-striped dark gray cassimere—lightweight, fire-resisting, cool.
3. **Easily Cleaned**
   One-piece construction, assembled by snaps only—can be easily disassembled for cleaning.
4. **Long Wearing**
   The chrome tanned Protective Turban has no stitching whatever. The only stitching on the cassimere Turban is on the hemmed edges.
5. **One Size**
   Due to practical design, one size fits every type of head closely enough for all practical purposes.
6. **Protects Hair and Ears**
   Holds hair snugly in place, protects hair, ears, and back of neck from flying sparks.
7. **Exclusive Design**
   Styled by John Fredericks—one of America's foremost millinery creators—guided by a practical welder.



The welding helmet fits comfortably over the AO Protective Turban.



Note how AO Protective Turban covers ears and back of neck.

American Optical
COMPANY
SOUTHBRIDGE, MASSACHUSETTS
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smart work clothes
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Smart
Work Clothes

Safety-Styled
for
Women of Action

E·R·MOORE Company

932 Dakin Street, Chicago 13, Illinois

Notice to Customers: No price for any article listed or described herein exceeds the ceiling price for that article as determined by the general maximum price regulation issued by the Office of Price Administration. On request, we will furnish you with statement of our maximum prices on any listed articles about which you inquire. We reserve the right to make any changes in design or construction of styles as may be required by future governmental regulations.
—E. R. Moore Company.

MOORE MATERIALS...

Moore Workwear is available in many sturdy, hard-wearing, all-cotton materials including:

Sport Denim, strong, long-wearing and popular for work clothes.

Midway Suiting, a firm, smooth-finished attractive material, woven to take hard wear.

Fortress Twill, closely woven fabric offering finest protection. Lint-free finish guards against damage to precision instruments.

And many others—all fast-dye, Sanforized or Tru-Shrunk*, tested and approved by the U. S. Testing Co. Labs. for fast color, wearing qualities and washability. Material swatches and made-up samples of any styles will be gladly furnished.

*[illegible] 2%.

MOORE

Victory Workwear

for Women...

For your protection and to assure you that materials used in Moore Victory Workwear are high in quality and will wear well, each has been scientifically tested in the laboratories of the U. S. Testing Company, Inc. The Seal of Quality signifying approval of this impartial testing company is shown at the left and certifies that Moore materials have been tested and approved by them for hard and satisfactory wear, fast color and washability.

Women look smart

DESIGNED exclusively for women, Moore Victory Workwear has the careful cut and smooth fit so feminine and flattering to women. The nipped-in waistline, the pleats and tucks all in the right places, give that trim, slim appearance women cherish.

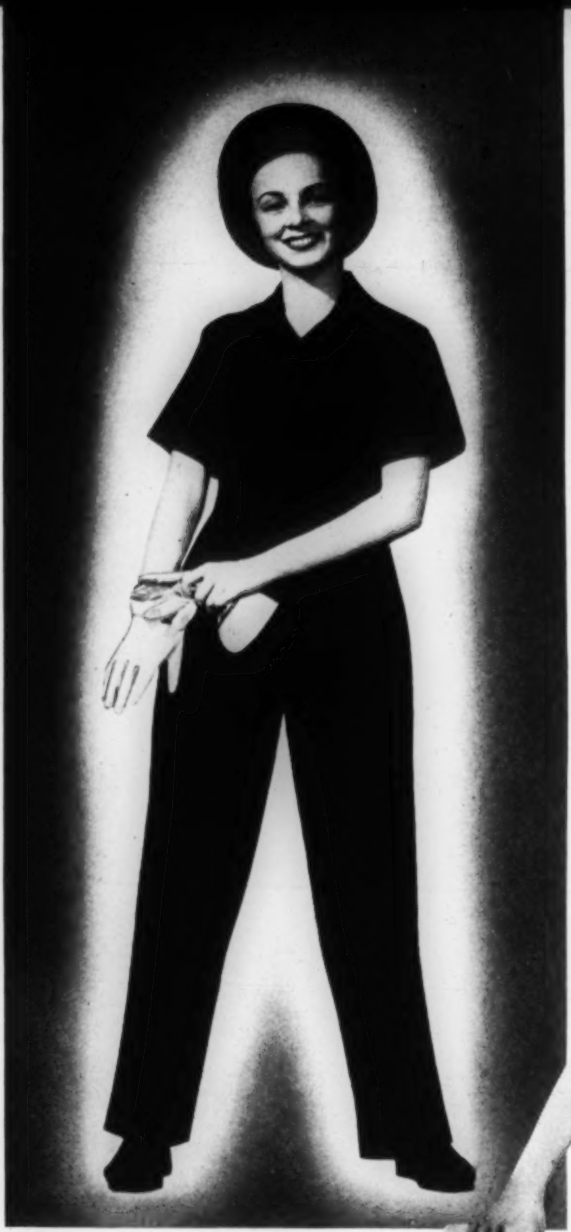
On the job women are comfortable and safe in *safety-styled* Moore Victory Workwear. They're able to work faster and more efficiently because each Moore style has been tested in action for freedom of every possible movement and activity. Double-stitched seams are able to take rough treatment and hard laundering. The non-sparking buttons are a safety feature necessary for those who work with inflammables. Roomy pockets are placed for convenience and yet are out of harm's way.

Expertly Tailored—Yet Priced Low—On the street, going to and from work, women are confident they are attractive appearing in well-tailored Moore Victory Workwear. In fact, the smart tailoring of Moore styles equals that of expensive sportswear, yet Moore Workwear is priced amazingly low—within the means of every worker.

Sanforized—No Trouble in Laundering—There's no trouble in laundering Moore Workwear—no special, careful handling is required because Moore styles (ready to wear at once) are Sanforized or Tru-Shrunk and will not shrink more than 2%. They can be washed over and over and come out nicely fresh and ready again to "take it."

Samples Sent—Look over the attractive styles shown here. Then let us send you samples of the styles you prefer. Whether your needs range from a simple dress or the all-protective coverall, you're sure to find a Moore style softly tailored with a flattering fit to please the most discriminating women. Hats by Moore, too, are in the feminine mood and combine smartness with the necessary safety features. Use the handy card on page 7 to request samples. We know you'll like Moore Victory Workwear!

ON THE STREET . . . ON THE JOB . . .

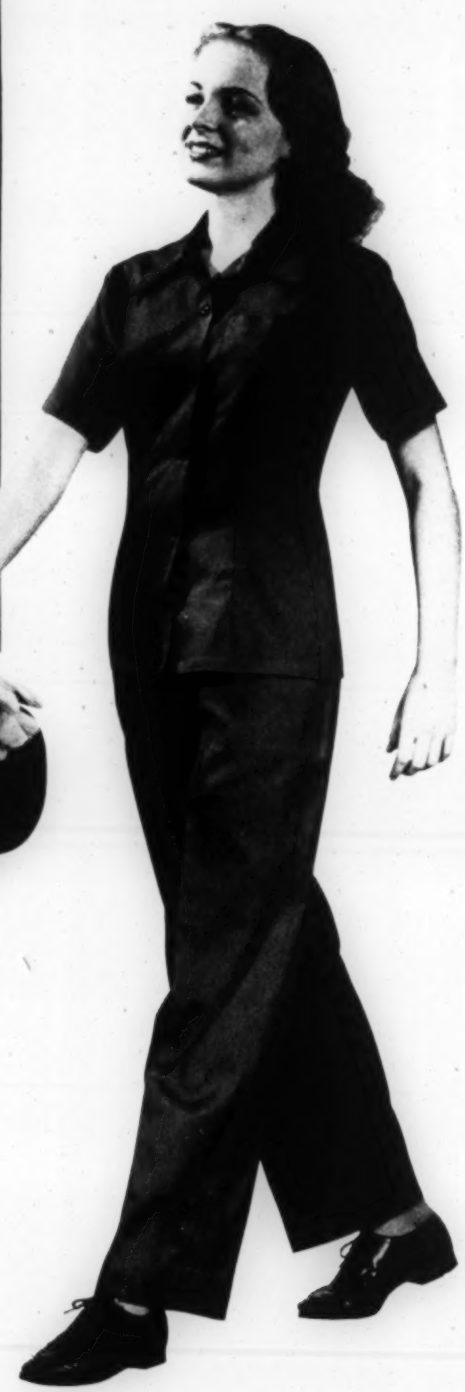


At left—*The same carefully tailored slack suit shown below is illustrated at left with jacket tucked inside for greater safety on the job.*

V109 Slacks and V121 Jacket

Smooth-fitting slack suit, superbly tailored as your favorite sportswear. Slacks have that popular "man-tailored" look achieved by trouser pleats that spring from the neat waistband. Adjustable half belt in front with D-ring fastener. Roomy pockets on each side are convenient and practical. Button opening on the left. Adjustable ankle-tabs. Shown with attractive, button-front jacket, slightly fitted, with convertible hi-low collar —in matching material to be worn either in or out.

V109 Slacks and V121 Jacket available in Sport Denim, Midway Suiting, Fortress Twill and many other all-cotton materials.



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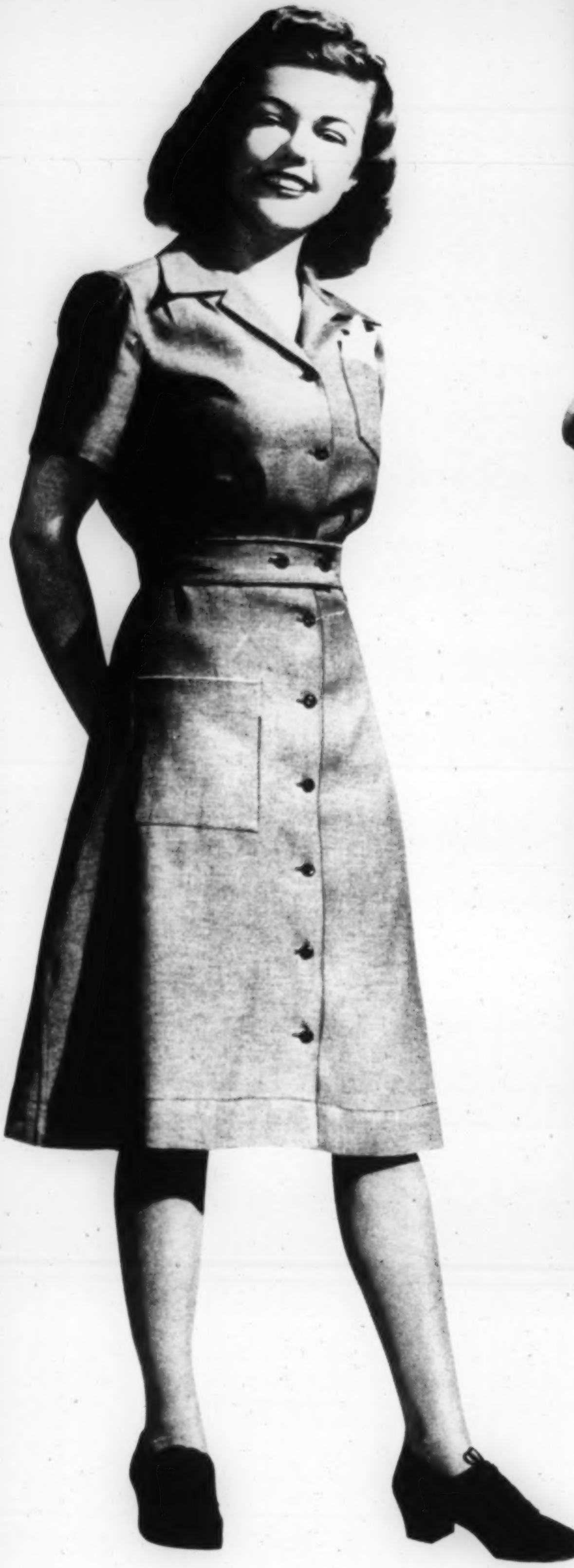

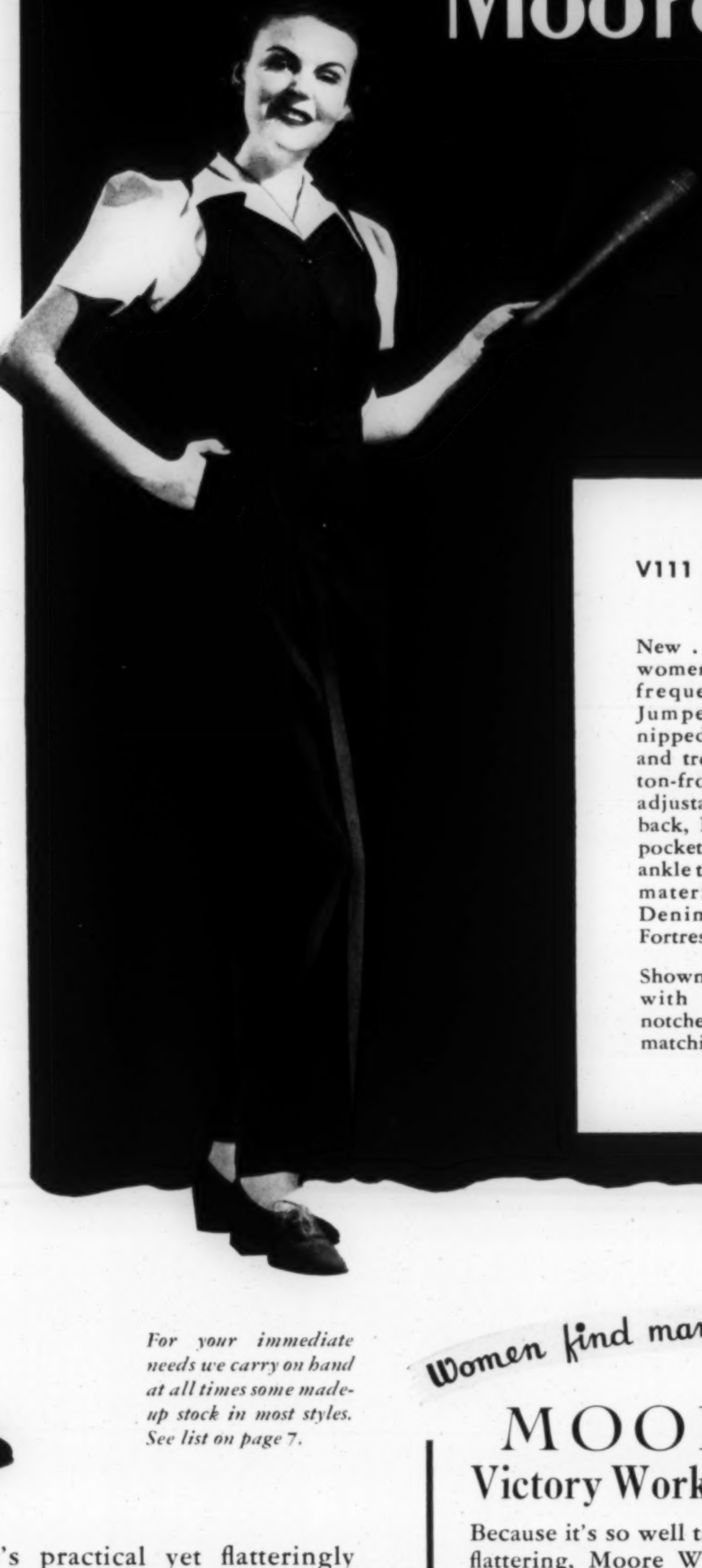

V111 Jumper Slacks with V107 Blouse

New . . . and popular with women because they allow frequent blouse changes, Jumper Slacks with their nipped-in, darted waistline and trouser pleats have button-front opening, separate, adjustable belt attached at back, D-ring fastener, set-in pockets in slacks, adjustable ankle tabs. In many all-cotton materials including Sport Denim, Midway Suiting, Fortress Twill.

Shown with button-front shirt with puffed sleeves and notched collar in white or matching materials.

For your immediate needs we carry on hand at all times some made-up stock in most styles. See list on page 7.

V114—Classically simple dress that's practical yet flatteringly slim. The attractive buttons down the front make it easy to get into and a dream to launder. Darts at waistline for figure-fit; patch pockets on skirt and blouse; belt attached at back. In all-cotton materials including Sport Denim, Midway Suiting, Fortress Twill.

Women find many extra uses for

MOORE
Victory Workwear..

Because it's so well tailored and flattering, Moore Workwear is versatile enough to carry on anywhere. At the end of a job there're countless uses a woman will find for her Moore suit—at work or play.

ctory Workwear

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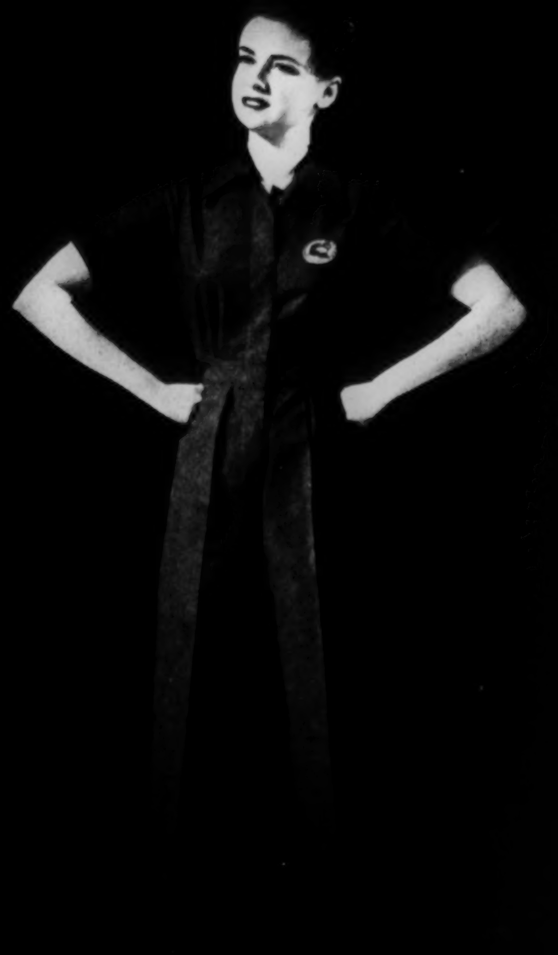
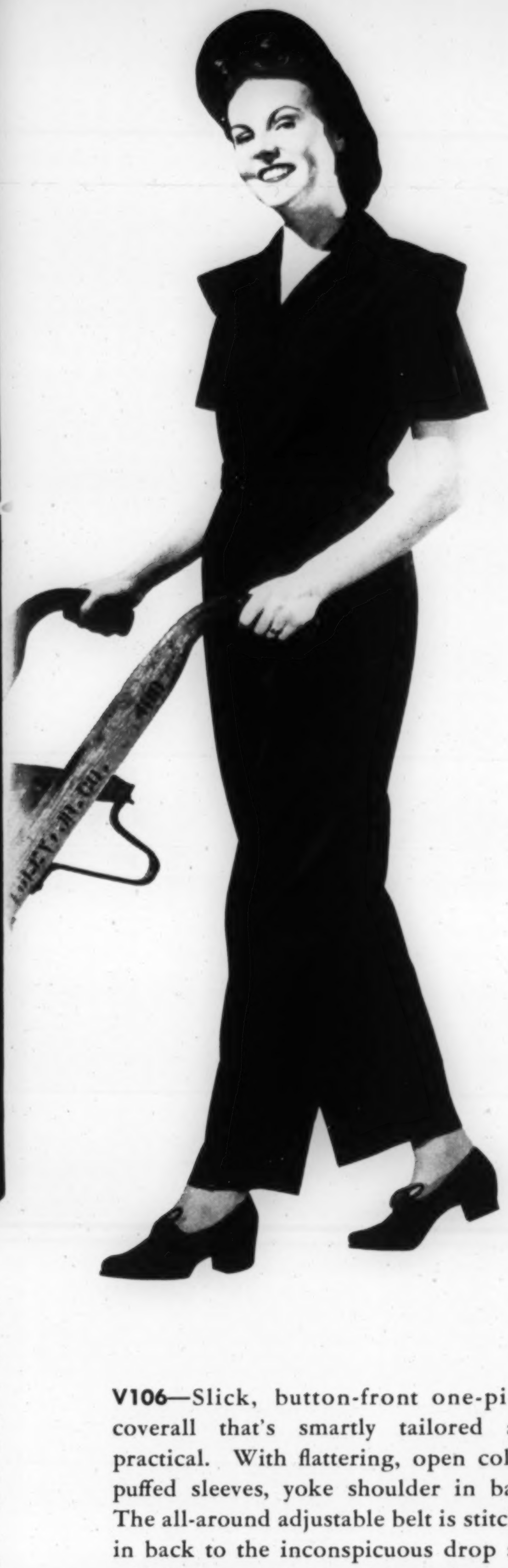




V100—One-piece coverall with a fit that's lovely to behold! The tucks at waist, stitched-down belt with adjustment tabs at sides, convertible hi-low collar make it distinctively feminine yet it has many safety, convenience and comfort features: Bi-swing pleat action back, a patch hip pocket and pocket on shirt, concealed drop seat, fly front opening which protects button fastenings from coming into contact with machinery, adjustable ankle-tabs. In Sport Denim, Midway Suiting, Fortress Twill and other all-cotton materials.

V106—Slick, button-front one-piece coverall that's smartly tailored and practical. With flattering, open collar, puffed sleeves, yoke shoulder in back. The all-around adjustable belt is stitched in back to the inconspicuous drop seat which closes with neat Gripper fasteners. Patch pockets on right front of slacks and on blouse. Adjustable ankle-tabs. In Sport Denim, Midway Suiting, Fortress Twill and other all-cotton materials.

Headwear with Eye-appeal

JV300

JV301

WOMEN ARE

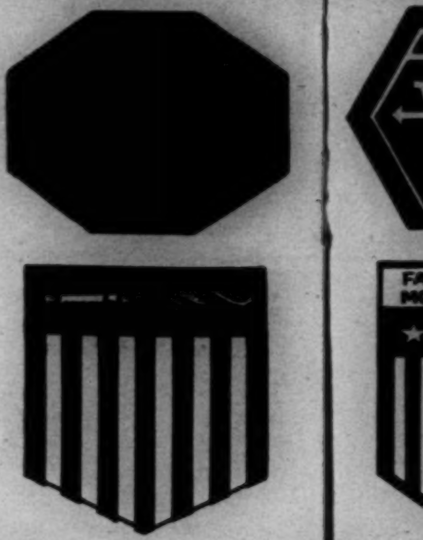
Moore Styling
Designed exclusively for women, Moore Workwear and Headwear are expertly tailored and carefully cut by makers of apparel for women since 1912. Attractive fit, perfect comfort and absolute safety are the result.

Moore Quality
Moore Workwear and Headwear are made of tested material—approved by U. S. Testing Co. Labs. to assure long wear, fast color and washability.

Moore's Low Prices
For Moore's fine quality and expert tailoring, prices are remarkably low—within the budget of all workers.

COMPANY EMBLEMS

Build morale and add decoration to Headwear or Workwear by adding insignia. 1-2- or 3-color woven emblems ready to attach with needle and thread. Fast dye, washable. Submit sketch of style, indicating colors and size. Prices start at approximately 6c each—4c each 1000 or more.



JV209

W

Rheem

FAIRBANKS, MORSE & CO.

RELIANCE

SAMPLES . . . So that you may see and have modeled actual made-up styles of Moore Victory Workwear and Headwear, let us send you samples of any styles you may be considering. Return the card below for price list, material swatches and complete details of in-stock and made-to-order styles. There's no obligation. Just fill in and mail the card below today!

CHECK AND MAIL THIS CARD ☐

for made-up samples. No obligation except to return them.

MOORE SIZE CHART HERE ☐

showing corresponding measurements of Moore sizes

E. R. MOORE COMPANY

Gentlemen: Please send complete details of Moore Victory Workwear and Headwear—prices, swatches showing various materials and colors, also rush samples of the styles I have checked. It is understood I will return the samples when I am finished with them (within 30 days) or retain them at the invoiced price.

Name.......................................

Firm.......................................

Address.......................................

City.................. State..................

V109 Slacks.............. ☐

V121 Jacket.............. ☐

V114 Dress.............. ☐

V111 Jumper Slacks........ ☐

V107 Blouse.............. ☐

V100 One-piece Coverall... ☐

V106 One-piece Coverall... ☐

JV300 wool felt hat with rayon snood.......... ☐

JV209 work cap with visor. ☐

Headwear with Eye-appeal

JV300 Frankly feminine, this Moore hat protects and flatters at the same time. Ventilated half-crown and visor of 100% wool felt with fine-knit rayon snood in back to guard the hair. Lightweight, cool and comfortable. Instantly adjustable to any head size or any hair style. *In Navy Blue Only.*

Can be worn back of pompadour (shown at right) for a flattering hat appropriate for all street wear. **JV301** same as JV300 except crown not perforated.

WOMEN ARE

Moore Styling

Designed exclusively for women, Moore Workwear and Headwear are expertly tailored and carefully cut by makers of apparel for women since 1912. Attractive fit, perfect comfort and absolute safety are the result.

Moore Quality

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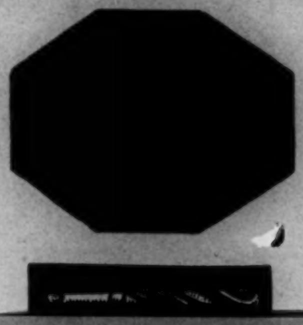

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by
Addressee

BUSINESS
FIRST CLASS PERMIT NO. 2

E·R·MO

9

JV209 Stunning work cap with visor and full, deep crown. Hair may be worn showing (at left) or tucked completely inside. Very popular with women of many plants because of its excellent protection, its attractiveness and its washable, Sanforized or Tru-Shrunk (maximum shrinkage 2%) material to match Moore Workwear. Adjustable to all head sizes.

Rheem

FAIRBANKS.
MORSE & CO.

No
Postage Stamp
Necessary
If Mailed in the
United States

NESS REPLY CARD
RMIT NO. 239, SEC. 510 P. L. & R., CHICAGO, ILL.

· MOORE Company

932 DAKIN STREET

CHICAGO 13, ILLINOIS

SAMPLES . . . So that you may see and have modeled actual made-up styles of Moore Victory Workwear and Headwear, let us send you samples of any styles you may be considering. Return the card below for price list, material swatches and complete details of in-stock and made-to-order styles. There's no obligation. Just fill in and mail the card below today!

It's EASY to Order from MOORE

MOORE SIZE CHART

Moore Size		*Bust*	*Waist*	*Hips*
12	for	30	24	34
14	"	32	26	36
16	"	34	28	38
18	"	36	30	40
20	"	38	32	42
22	"	40	34	44
42	"	42	36	46
44	"	44	38	48
46	"	46	40	50

This chart shows you the corresponding measurements for the sizes used in Moore Workwear.

When ordering, make no allowance for shrinkage, as Moore Workwear is full cut and either Sanforized or Tru-Shrunk (guaranteed not to shrink more than 2% under U. S. Test No. CS59-41).

WE CAN'T AFFORD TO LET UP NOW

LET'S ALL BACK THE ATTACK!

FOR VICTORY
BUY
UNITED
STATES
SAVINGS
BONDS
AND STAMPS

E. R. MOORE *Company*

932 Dakin Street · Chicago 13, Illinois

New York Representative

H. F. EDLUND

4524 Carpenter Ave.—Fairbanks 4-0927—New York 66, N. Y.

April, 1944

IMMEDIATE DELIVERY

Workwear for Women

We have in stock for immediate shipment in limited quantities the following Moore Victory Workwear styles:

V100 -- Coverall in #59 Sport Denim, Sentry Blue
#53 Service Twill, Navy
V106 -- Coverall in #60 Midway Suiting, Navy
V121 -- In-or-outer Jacket in #59 Sport Denim, Navy
#60 Midway Suiting, Flight Blue
V109 -- Slacks in #59 Sport Denim, Navy
#60 Midway Suiting, Flight Blue
V114 -- Dress in #60 Midway Suiting, Navy
#60 Midway Suiting, Pacific Blue

MINIMUM ORDER, ONE DOZEN ON ABOVE STOCK STYLES

All Moore Workwear styles made to order in other materials and colors (see price list and sample card) in about 5 weeks after receipt of order.

Minimum order, four dozen in any one style or color on all made-to-order styles and colors.

HEADWEAR

We have HEADWEAR in stock for immediate delivery in limited quantities in the following styles:

JV209 -- in #60 Midway Suiting, Navy
JV300 - Wool Felt, Navy

Large quantities promptly made up on order.

Due to a shortage of skilled help in the Headwear Manufacturing Department all other styles and colors are discontinued.

E. R. MOORE Company
932 Dakin Street - Chicago 13
Wellington 3424

8 Big Reasons

Why the New

STASAFE EYE MASK

is called

"Miracle" EYE PROTECTION

ACCLAIMED BY USERS FO

PHENOMENAL IMPACT RESISTANCE

DUE TO ONE-PIECE PLASTIC CONSTRUCTION

READ THIS ENGINEERING REPORT:

"Customer much interested in Eye Mask for use as cover goggle. We abused sample, then gave it their drop-ball test. Placed Eye Mask on wooden block without cushion . . . a $^{7}/_{8}$" ball dropped from a height of 7 feet did not phase the Eye Mask. Ball bounced about 18" high on each of 10 drops. We then doubled up by dropping the $^{7}/_{8}$" ball and a half inch ball at the same time, and were still unable to fracture the Eye Mask. The customer is satisfied as to strength."

EXTRA VENTILATION

To provide additional comfort
culation of air on unusually h
we can supply your Eye Mas
forated" as shown in the illu
There is no extra charge for this
but it must be specified at the ti
order or your Eye Masks will be
without the perforations.

ADJUSTABLE to any HEAD SIZE

BY BOTH ELASTIC and BUCKLES AT TEMPLES

FEATHER LIGHT less than 2 ounces

This light weight assures comfort and lessens fatigue.

NO REFLECTION — NO DISTORTION

While the frosted area still admits light, it prevents distracting reflections from interfering with clear vision.

COVER GOGGLE PRACTICALITY!

Deep drawn to provide comfortable, safe clearance for prescription spectacles. Expensive prescription ground safety lenses are not necessary when you wear the Eye Mask.

PERFECT FACIAL FIT

MADE IN LARGE AND SMALL SIZES

Curved and molded to comfortably and closely fit normal facial contours.

NON-FLAMMABLE and Heat Resistant

READ THE REPORT OF A CUSTOMERS TEST!

"Questioned heat resistance so he put a pair on and faced heat treat oven until he burned face—heat didn't bother the Eye Mask. Held them at oven in gloved hand until gloves smoked and still didn't cause damage—so ordered a dozen to try on the job."

Another S

FOR THESE FEATURES!

TION for Comfort

comfort and cir-
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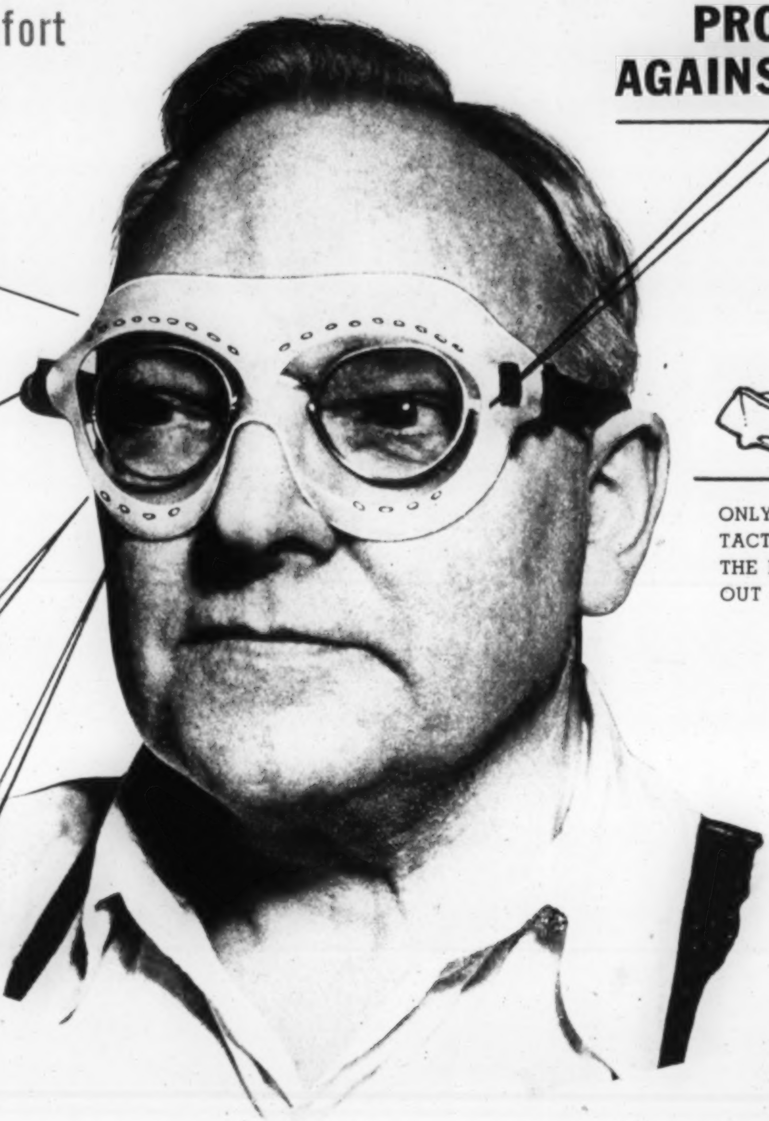
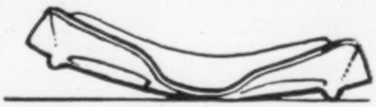


PROTECTION AGAINST ABRASION

A raised area at the outer edge of each eye piece helps protect the Eye Mask from being scratched when it is laid on a desk or bench. See sketch below.



ONLY TWO POINTS OF CONTACT—THE NOSE BRIDGE AND THE RAISED AREA. BOTH ARE OUT OF RANGE OF VISION.

ANTI-GLARE MODEL

The Eye Mask is also available in a Soft Green Tint, at no increase in price.

STASAFE REFINISHING SERVICE

IF YOUR EYE MASKS SHOULD BECOME SCRATCHED; simply send them to us and we will quickly and economically refinish the vision areas. At the same time we will wash, sterilize and repack each Eye Mask.

Prices for this service are outlined on page 4. Should your Eye Masks be damaged beyond recovery, you will be so advised.

r STASAFE *Product*

STASAFE

EYE MASK PRICES

PACKAGING. Each Eye Mask is individually packed in a cardboard carton which serves as a protective container when the Eye Mask is not in use.

STASAFE EYE MASK (Large or Small) (Clear or Green)

Lots of 1 to 11	$2.00 each
Lots of 12 to 143	1.80 each
Lots of 144 and up	1.70 each

REFINISHING SERVICE

Refinishing minor scratches from vision area—sterilizing and repacking.............25c each

(Minimum quantity—one dozen at a time)

HEAD BANDS

Per set of strap and 2 buckles..........12c set

TERMS: 1% 10 Days—Net 30 Days, F. O. B. CHICAGO

In Illinois—2% will be added for occupational expense.

Prices subject to change without notice.

STANDARD SAFETY EQUIPMENT CO.

Makers of STASAFE Products

NEWARK (2)
127-A Washington

232 WEST ONTARIO STREET
CHICAGO (10) ILLINOIS

CLEVELAND (6)
2012 E. 102nd

NOTE: WHEN ORDERING Specify

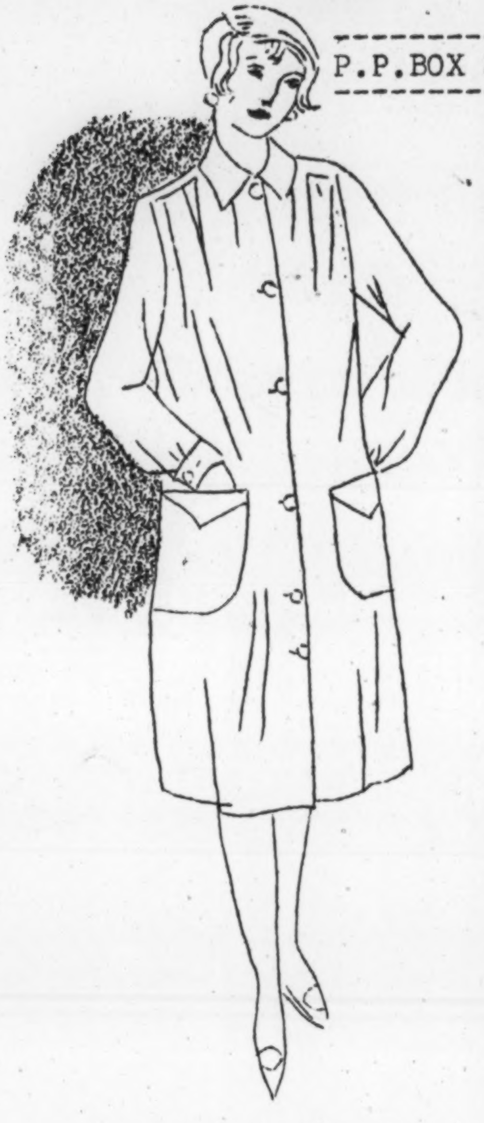
1. Size
2. Color
3. Perforated for extra ventilation if this feature is desired.

STERLING VALUE CO.

MANUFACTURERS OF SMOCKS

P.P.BOX 32, WASHINGTON BRIDGE STA., NEW YORK, N.Y.

WOMEN'S BUREAU
DEPARTMENT OF LABOR



SMOCKS COVER
THE
HOME FRONT

Gentlemen:

Do the young women in your organization look like an efficient force of business women?

Many offices and counting rooms are equipping their employees with "Sterling Smocks."

The employees are still able to indulge in their hearts' content, in flashy, fanciful raiment, but during business hours they appear in smart, trim "Sterling Smocks."

You have no idea what a decidedly better impression this makes - and the girls like the idea because it provides protection for their good clothes during working hours.

This SMOCK may be had in sizes 30 to 46. It is no trick to order one. Simply state dress size.

You have our guarantee that the material and workmanship will be satisfactory. Your MONEY will be refunded if you are not fitted to your satisfaction....provided the request is made within five days and the smock shows no sign of wear.

If the young women in your office will club together and buy a dozen or more smocks we will make a special discount of 5% for a short time only. "Sterling Smocks" come in blue, green or beige ~~linene~~-suiting at $3.95 per garment, prepaid.

Send your check with order...subject to refund provisions above.

Yours for office efficiency,

Sterling Value Co.

SPECIMEN ORDER COUPON

To: Sterling Value Co; P.O.Box 32,
Washington Bridge Station, New York, N.Y.

Here is our check for $_______ for ______ Smock (s). Size of dress worn________. Send us______Tan______Blue______Green.

NAME______________________________ ADDRESS______________________________

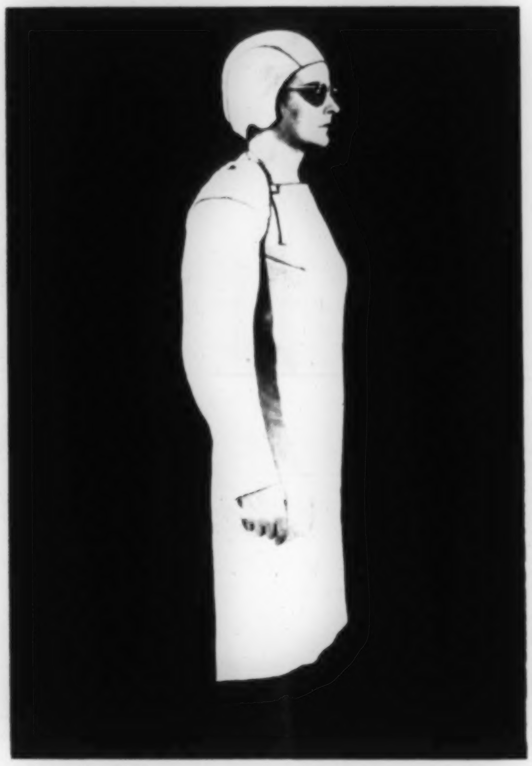
P.S. We also sell men's OFFICE COATS. Details free.

Sec. 562, P. L. &

Miss Anne Larrabee, Chief Clr
Women's Bureau
Dept of Labor Bldg.,
Washington, D C

Room 1322

Welders' Protective Clothing
TAILORED for WOMEN



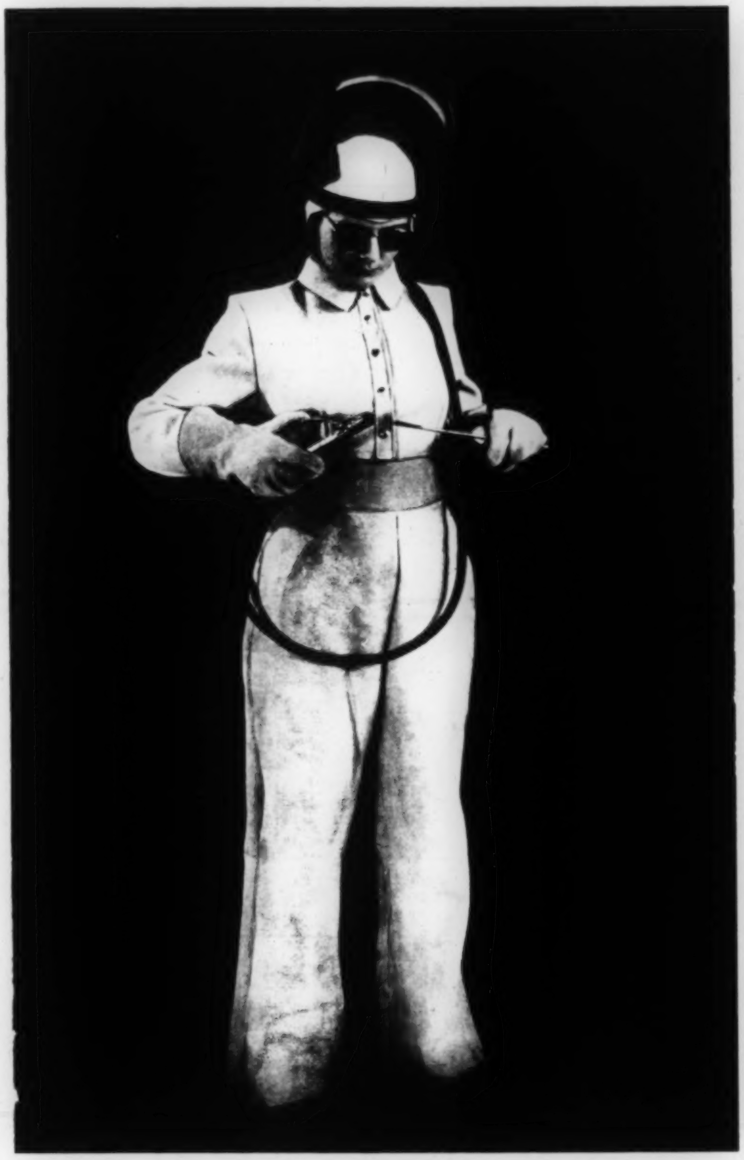
Debutante Protection Outfit, consisting of Tailored Sleeves and Tailored Apron

COMPLETE ASSORTMENT

300 CL	TAILORED CAP
303 CL	TAILORED SHORT JACKET
306 CL	TAILORED COAT
307 CL	TAILORED OVERALLS
309 CL	TAILORED SLEEVES
336 CL	36-INCH TAILORED APRON

Manufactured by
SAFETY EQUIPMENT SERVICE COMPANY
Putnam, Connecticut

Solely for
American Optical
COMPANY
Southbridge, Massachusetts

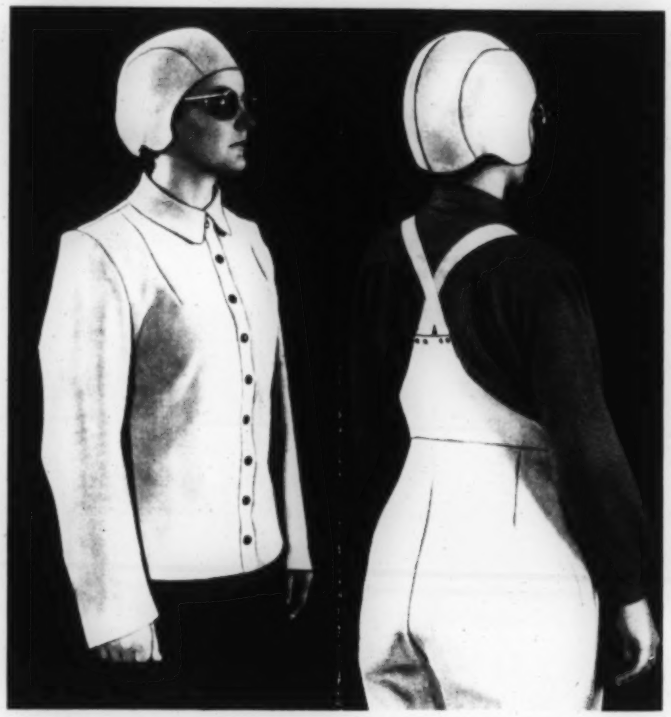


American Optical
COMPANY

10 PRINTED IN U.S.A. 42

Select the Welders' Protective Apparel You Need From AO's Complete Assortment of Tailored Clothing EXCLUSIVELY STYLED FOR WOMEN

To handle a welder's job skillfully and efficiently, women need protective clothing that can be worn with ease and comfort. It must be as light in weight as possible, consistent with adequate protection. It must be cut to afford free and easy movement of the body, but fit so snugly that there will be no gaps or openings to permit entrance of flying sparks.



Tailored Coat — Note smart cut, shaped sleeves, and tucks running down from the shoulders.

Tailored Overalls — Note ample roominess at hips and seat. Also note how Tailored Cap protects hair.

Correctly Styled

To combine snug, comfortable fit with smartness, AO engaged an expert designer. As a result every garment in AO's complete line of tailored protective clothing for women has been styled according to accepted dressmaker patterns.

Shaped for Comfort

AO Tailored Overalls are styled like women's slacks. A side placket insures a trim, comfortable waist line. The flared trouser legs provide additional protection for the feet and make the garment easy to put on and take off over women's safety shoes.

The yoked backs of the Tailored Coat and the Tailored Short Jacket permit greater freedom of arm movement. Tucks running down from the shoulders in front provide ample fullness and flexibility at the bust.

Tailored Cap

To protect women's hair and ears during the welding operation, AO stylists have designed a special Tailored Cap. It is made of chrome tanned leather, shaped somewhat like a bathing cap, with flaps extending over the ears. It is fashioned to cover the hair and hold it snugly and comfortably in place.

Selected Materials

AO Tailored Protective Clothing is made of specially selected chrome tanned cowhide. It is light in weight, yet affords positive protection. All garments have a soft suede-like appearance.

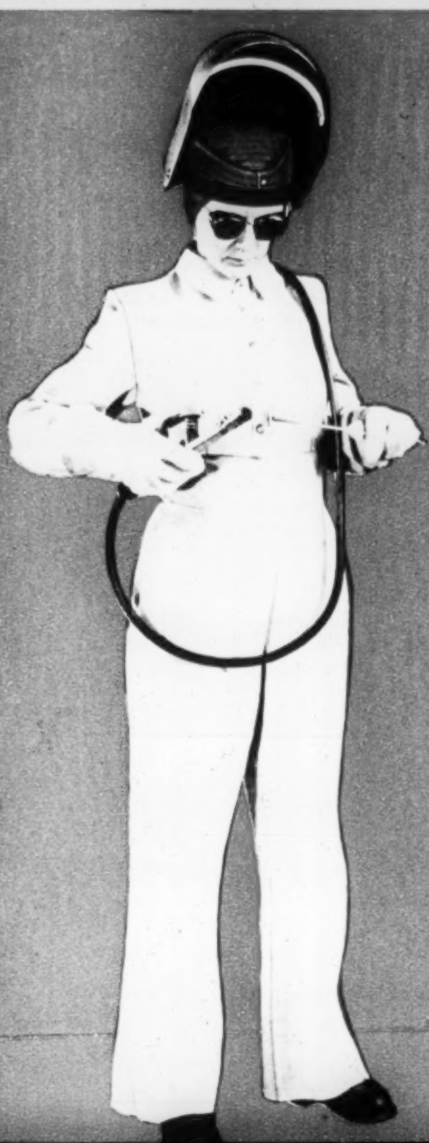
Fitted Sleeves

All sleeves are shaped to fit, providing extra comfort and permitting easy arm movement. Naturally, this type of sleeve lasts a great deal longer than a straight, shapeless sleeve which wrinkles excessively at the fold of the arm.

Welted Seams

Seams of AO Tailored Protective Clothing wherever possible, are located away from the direct line of fire. Welted inseam construction is used throughout for extra strength and to protect the stitching from hot sparks. Welted seams also add a note of smartness.

American Optical
COMPANY



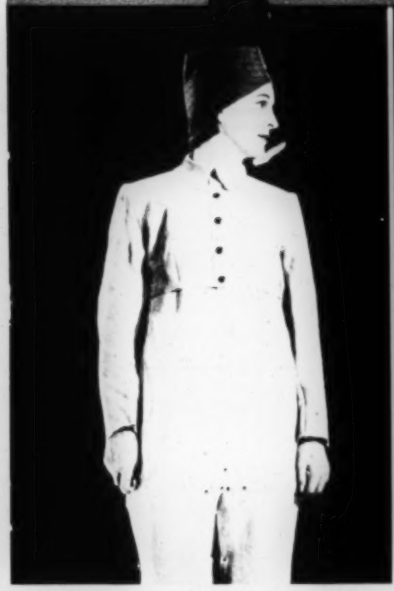
NEW

AO Protective Clothing Especially Tailored for Women Welders

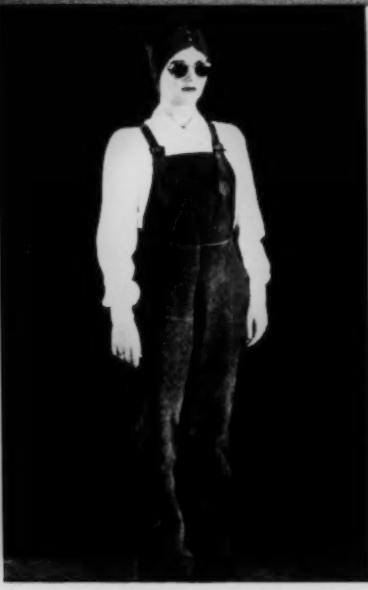
MADE OF SELECTED MATERIALS . . . . SHAPED FOR COMFORT . . . . SMARTLY STYLED

Now women can obtain welders' leathers that not only offer adequate protection but also fit snugly and comfortably, look smart, and withstand severe use and abuse. Every garment in the new AO line of Tailored Protective Clothing has been styled according to dressmaker patterns. As a result, these leathers permit free and easy movement of the body, enabling women welders to turn out more and better work—with less fatigue. Expert design also adds notably to garment life . . . especially in the sleeves, at the waistline and across the shoulders.

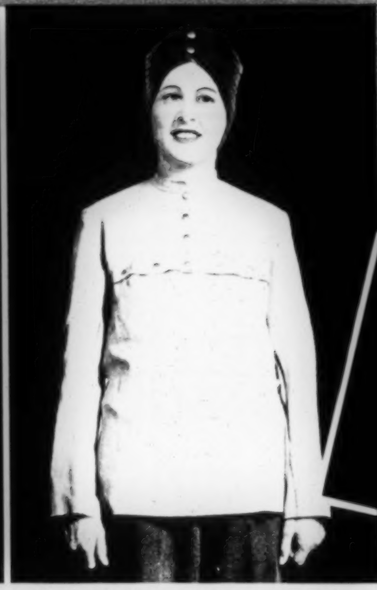
AO Tailored Protective Clothing is made of specially selected chrome tanned cowhide. It is as light in weight as possible, consistent with adequate protection. Get in touch with your nearest AO Branch Office for further details.



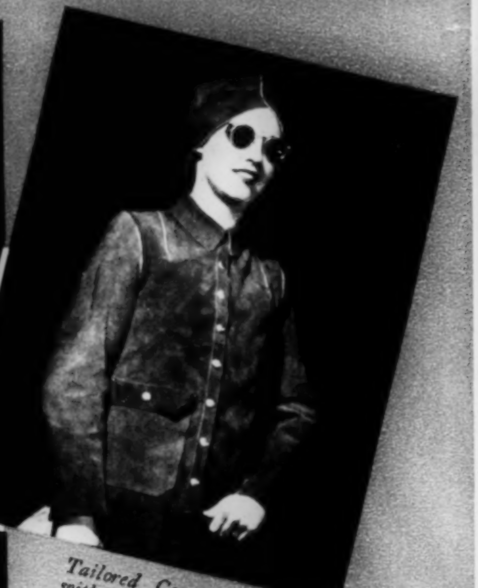
Tailored Short Jacket with Tailored Split Leg Apron—Soft, comfortable, lightweight, yet affords positive protection.



Tailored Overalls — Styled like women's slacks with bib and shoulder straps, and side placket to insure trim, comfortable waist line.



Tailored Cape Sleeves and Bib—Permits easy freedom of arm movement, provides excellent shoulder, arm, and frontal protection.



Tailored Coat—Smartly cut, with shaped sleeves and tucks running down from shoulders.

American Optical

COMPANY

SOUTHBRIDGE, MASSACHUSETTS

World's Largest Manufacturer of Ophthalmic Products

It's Attractive! It's Comfortable! It's

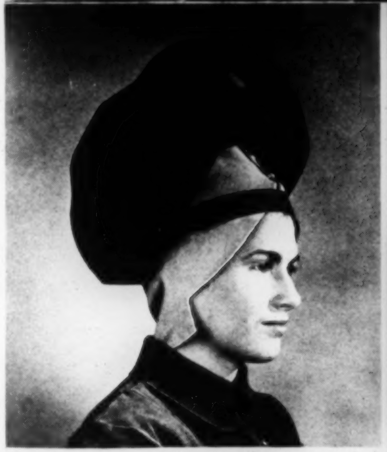
THE NEW

PROTECTIVE TURBAN for WOMEN WELDERS

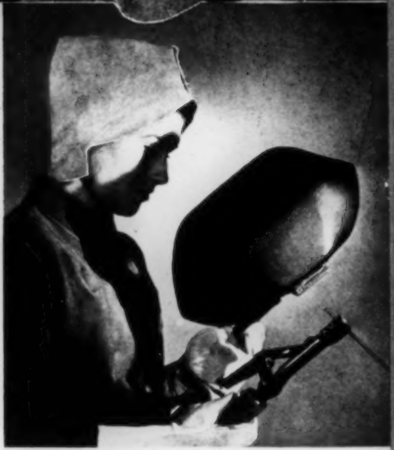
Styled by John Frederics

Here's the protective turban that women welders have been demanding ever since they took up the wire and holder. It's practical, comfortable to wear—with or without helmet—provides protection against flying sparks, holds the hair snugly in place, yet it's smartly styled—a creation of John Frederics, New York. Note these 7 advantageous features:

1. **Comfortable to Wear**
   Designed for comfort *underneath* a welding helmet—without alterations.
2. **Leather or Cassimere**
   Offered in lightweight gray or brown leather—chrome tanned, and also in pin-striped dark gray cassimere—lightweight, fire-resisting, cool.
3. **Easily Cleaned**
   One-piece construction, assembled by snaps only—can be easily disassembled for cleaning.
4. **Long Wearing**
   The chrome tanned Protective Turban has no stitching whatever. The only stitching on the cassimere Turban is on the hemmed edges.
5. **One Size**
   Due to practical design, one size fits every type of head closely enough for all practical purposes.
6. **Protects Hair and Ears**
   Holds hair snugly in place, protects hair, ears, and back of neck from flying sparks.
7. **Exclusive Design**
   Styled by John Frederics—one of America's foremost millinery creators—guided by a practical welder.



The welding helmet fits comfortably over the AO Protective Turban.



Note how AO Protective Turban covers ears and back of neck.

American Optical
COMPANY
SOUTHBRIDGE, MASSACHUSETTS
Branches in Principal Industrial Centers

SAFETY - "SHOE FACTORY"

SHOE FACTORY

A MONTHLY DEPARTMENT OF HIDE *and* LEATHER *and* SHOES

Committee Says U. S. Now Has "War Model" Shoes

A TASK committee appointed by the War Production Board to study the feasibility of adopting, manufacturing, and distributing war model shoes has reported to the WPB that it believes such a program would be impracticable and would entail economic disadvantages far outweighing any possible gains (H&L&S, June 19).

The committee also reported that the shoe industry has been far seeing in developing and maintaining close cooperation with Governmental agencies and that the restrictions imposed under Conservation Order M-217 and amendments have resulted in the creation and production of war model shoes, without specifically naming them as such.

Irving S. Florsheim, of the Florsheim Shoe Co., Chicago, was chairman of the task committee. Members were: John A. Bush, Brown Shoe Co., St. Louis; Irving Edison, Edison Bros. Stores, Inc., St. Louis; Maxey Jarman, General Shoe Corp., Nashville, Tenn.; Louis H. Salvage, Louis H. Salvage Shoe Co., Manchester, N. H.; Frank J. Schell, Sears Roebuck & Co., Chicago; and Harold F. Volk, Volk Bros., Dallas, Tex.

Reporting on style reductions that have already been effected, the committee said:

"Shoe manufacturers representing approximately 52 per cent of shoe production in this country recently reported an average reduction of 57 per cent in number of shoe styles compared with styles prior to Sept. 10, 1942, when M-217 and amendments became effective. Also estimated saving in man-hours per 1,000 pairs, under provisions of M217, range from 2.4 per cent to 25 per cent, or from five man hours to 1,000 man hours per 1,000 pairs of shoes. Estimated savings in upper leather per 1,000 pairs are reported in varying percentages up to a maximum of 30 per cent. In terms of feet per 1,000 pairs, the replies show savings in upper leather from eight to 600 feet per 1,000 pairs.

"One of the five largest retail shoe distributors in this country, in an analysis of its spring, 1942, catalog, shows that, under Order M-217 and amendments, 51.2 per cent of all styles of men's, women's, and children's shoes shown were either simplified or eliminated. Of all styles listed in the fall, 1942, catalog 40.7 per cent were either simplified or eliminated, under the same WPB restrictions.

"One of the largest distributors of women's shoes, disposing of over 11,000,000 pairs of shoes per year, reports reductions in style purchased for spring and summer, 1943, as compared with the number of styles purchased for sale during spring and summer, 1942, of approximately 27.9 per cent. Similar comparison between purchases for the fall, 1943, with the fall, 1942, shows an average reduction in number of styles of 18.7 per cent.

"A separate survey of 22 New England shoe manufacturers reports reduction from 594 styles to 225 styles, or a reduction of approximately 62.1 per cent, for the first three months of 1943 compared with the same period in 1942. The number of pairs of shoes manufactured by the 22 reporting shoe manufacturers was reduced 16.2 per cent during the same quarterly periods.

"In addition to reductions in number of styles and increasing production of so-called 'war model' shoes brought about through the WPB program, other styles will automatically be eliminated by shoe manufacturers beyond those required under Order M-217 because of the inability to obtain various findings and materials for such manufacture.

A digest of the report of a

War Production Board

task committee on footwear standardization

"Other regulations which have been issued by the War Production Board include the orders restricting the use of certain grades and weights of sole leather to military shoes, orders reserving certain hides and skins for leather for government shoes, orders placing limitations on quantities of leather to be tanned for civilian use and orders curtailing the use of cements, and other items—all of which have affected footwear production and have added to problems of manufacture.

"WPB restrictions under Order M-217 and amendments enable shoe manufacturers to produce relatively plain, serviceable shoes in approximately the same price ranges and grades in which they were made prior to Mar., 1942.

"Original Order M-217 was issued on Sept. 10, 1942, and with minor exceptions, the restrictions were not effective until Oct. 31st. Shoes produced in this period were not ordinarily available for sale at retail until the spring of 1943. Amendments to Order M-217 made on Feb. 13, 1943, generally became effective Apr. 30th, and the restrictions in these amendments will not affect the shoes offered through retail channels until late in the fall.

"There is a general lack of awareness as to the extent that the shoe industry has already simplified shoe styles and accomplished manpower and material reductions through the operation of the WPB program.

"The period since the effective dates of M-217 and amendments has been too short to reflect a complete picture of accomplishments in style simplification and reductions in manpower and material. The full effect of such changes will be more clearly noted by the public and Governmental agencies within the next six months, when retailers' inventories are reduced and simplified shoe styles are brought out for display and sale.

"War model shoes, as permitted under existing restrictions in M-217 and amendments, can be reasonably distributed during the period of the emergency."

Taking note of the use of substitute materials in footwear now being manufactured, the committee reported:

"The shoe simplification program, as provided for in M-217 and amendments, has already conserved inventory of raw materials on shoe manufacturers' shelves and in shoes on shoe retailers' shelves because of the smaller number of shoe types, styles, and colors.

"Some savings have been obtained by manufacturers as a result of elimination of new patterns and some savings have been effected by some manufacturers in the cost of sole leather, due to restrictions making it impossible to use the customary grades and weights. Such savings have been more than offset by increased overhead, high labor turnover, substitutions of women workers for skilled men workers, direct labor increases, war risk insurance, and other costs growing out of the war.

"Because of the highly competitive character of the shoe industry and the integrity of shoe manufacturers, wholesalers, and retailers, substitutions of sole and upper leather for what is customarily used in the grade are made only when Government regulations or shortages necessitate changes. It is the opinion of the committee that instances where advantage is taken of the war situation through substitutions of inferior materials are present in only a very small percentage of over-all production and operations."

The committee report dwelt at length upon England's experience with "utility shoes" and the progress which had been made in the creation and distribution of these war models in Britain.

The utility shoe scheme has been described in detail in an article by Alfred Henderson, published in the May 1 issue of HIDE AND LEATHER AND SHOES. This article traced the development of the utility shoe scheme, described and illustrated utility models, and discussed comparisons of the British utility shoe program with the proposals for development of similar war models in the United States. Much of this article is contained in the committee's report, which was released by the National Boot and Shoe Mfrs. Assn. June 17.

The task committee's report said of the British utility shoe scheme, in part:

"Close study of British experience with utility shoes shows definitely that such shoes have not brought reductions in shoe styles comparable to those obtained to date under M-217 and amendments.

"Under Britain's utility shoe program, the specifications are broad enough to allow manufacturers to incorporate variations in design. Each manufacturer must make 50 per cent of his production in utility footwear and must make the types and relative quantity of each type he was producing prior to 1939. Recently it became necessary to make changes in the minimum standards because of shortage of sole leather, so that even after adoption of fixed standards the available material in the end creates the standard rather than theoretical requirements.

"The British utility scheme does not require the substitution of war models for style models. The extent to which utility shoes will be made and sold is dependent largely upon consumer acceptance—not upon governmental regulation.

"The British utility plan does not to any great extent restrict styles. Advertisements in recent issues of British trade papers show many styles available which are not now permitted in this country under M-217 and amendments.

"The main advantage of the utility shoes in England is the saving for the consumer of the sales tax that applies to the sale of merchandise in England and limits the manufacturers' profit and the jobbers' and retailers' mark-up. Under our general maximum price order of 1942, prices are fixed. As there is no sales tax in this country, no advantage can be obtained by American consumers through sales tax reductions.

"In view of the interest in war model shoes in this country, it is well to study the early developments and changes which have been made recently in Great Britain's utility shoes.

"The problem of utility footwear was approached in England in the summer of 1941, with the view of simplifying production and distribution and eliminating waste of labor and material involved in the production of unnecessary patterns and sizes of footwear, as well as providing good ration coupon value for boots and shoes.

"During the winter of 1941-42 detailed utility footwear specifications were formulated after several months' discussion involving manufacturers, buyers, the Director of the Boot and Shoe Research Assn., the Leather Control, the Director of Civilian Footwear for the Board of Trade, the Central Price Regulation Committee, the British Standards Institutions, and other groups affected by the plan. Costings were worked out and manufacturers' maximum prices for each of 115 specifications agreed upon were fixed after protracted discussions with the industry about their rate of profit. A manufacturer charges a specified ceiling price, or his costs of production and sale plus five per cent, whichever is the lesser.

"It was decided that a strictly standardized shoe would not be practical because they found that such shoes would result in a waste of materials, particularly upper leather, and a waste of equipment which was already owned by shoe manufacturers.

"Active consideration of utility footwear started in Sept., 1941, and the task was so involved that the first directive was not issued until July, 1942, and the second, Oct. 1, 1942. This was approximately three years after England had been in the World War.

"Utility footwear is based on minimum standards of quality for sole leather, upper leather, linings—both cloth and leather, and other materials going into the shoes. Minimum standards of quality for outsoles are regulated by prices per pound of the bend used for cutting same and other restrictions as to minimum iron. In a like manner other sole leather items such as insoles, are determined by the price paid for offal and with limitations as to minimum weights.

"Extremely significant is the fact that under England's utility shoe program standard shoes are not produced. The specifications, giving maximum working particulars and minimum requirements relating to threads, fabric linings, fibre insole boards and stiffeners and toe puffs for boots and shoes, are broad enough to allow manufacturers, without waste of useful labor or materials, to incorporate variations in design. Men's utility boots and shoes are produced in 79 different styles; boys' in 20 styles; women's in 98 styles; and girls' in 28 styles.

"At the time the specifications were written on sole leather, the matter of pricing could be readily carried out inasmuch as a large percentage of English shoe manufacturers cut their own leather. It was further simplified by the fact that certain whole bends were set aside for civilian footwear and other bends were set aside for military footwear. It is interesting to note that in many cases where a 12 iron bend was cut for military outsoles, every sole was acceptable under the Army specifications. This differs completely from the sole leather system in this country, where the better portion of practically all bends are assigned for military uses, and only the remaining soles, which will not pass military inspection, can be used for civilian footwear.

"Utility footwear was created to take care of all branches of the shoe industry. Care was taken in the restrictions and specifications laid down so that the manufacturer was permitted to use equipment he owned and create styles which would not be frozen in the hands of the wholesalers or in the hands of the retailer after the war is over.

"Each manufacturer must make 50 per cent of his production in utility footwear and must make the types and relative quantity of each type he was producing previous to 1939. According to the latest reports, the production of utility footwear for the last quarter amounted to 60 per cent of the total volume.

"Great Britain did not have a general style conservation order which would correspond to WPB Order M-217, inasmuch as they had for several years very close allocation on all materials entering into their shoes. This, of course, would apply to regular shoes as well as to utility shoes. Their allocation is based on so many pounds in various types of sole leather per 1,000 pairs of shoes. In a like manner, they are allocated so many feet per 1,000 pairs for uppers, the linings, and the like. The leather allocated to them can be used almost as the manufacturer sees fit. In other words, he can have some high cutting patterns in upper leather, providing he has some low cutting patterns and thus reaches a balance in footage consumed.

"Sole leather of certain types is in shorter supply than it was when specifications were issued in July, 1942. The minimum standards of quality will have to be changed upwards and downwards from time to time as the available supply shifts.

"It recently became necessary to make changes in the minimum fixed standards because of shortage of sole leather. This change from the fixed standards to a reduced quality standard in the sole leather on utility shoes points conclusively to the fact that even after adoption of fixed standards, the available material in the end creates the standards rather than theoretical requirements.

"Policing utility footwear is rather difficult on account of shortage of experienced inspectors. The best method Great Britain has of checking the quality is through their system of allocating materials and checking purchases of all types of materials as well as checking inventories in the hands of manufacturers.

"Commenting on the feasibility and practicability of standardized shoes, manufactured according to Government prepared specifications, the committee reported it had explored conditions with reference to available material, facilities, and equipment, and the problems involved in the manufacture and distribution of so-called standardized shoes in this country, and expressed the opinion that:

"It is impossible to prepare proper specifications that will economically use all available material, as leather, the principal material used in shoes is a product of nature, made out of hides and skins of different animals, rather than a fabricated item.

Be 100% with your 10%
Buy WAR BONDS

"The preparation of specifications for the manufacture of standardized shoes that will adequately serve the population in a country the size of the United States, with the wide variations in climatic conditions, occupations, and buying habits, cannot be practically attained. The distribution of standardized shoes will definitely necessitate a change in the buying habits and will involve sacrifices on the part of the consumer without obtaining any benefits in the way of labor and material conservation which is the main objective of the WPB restrictive program.

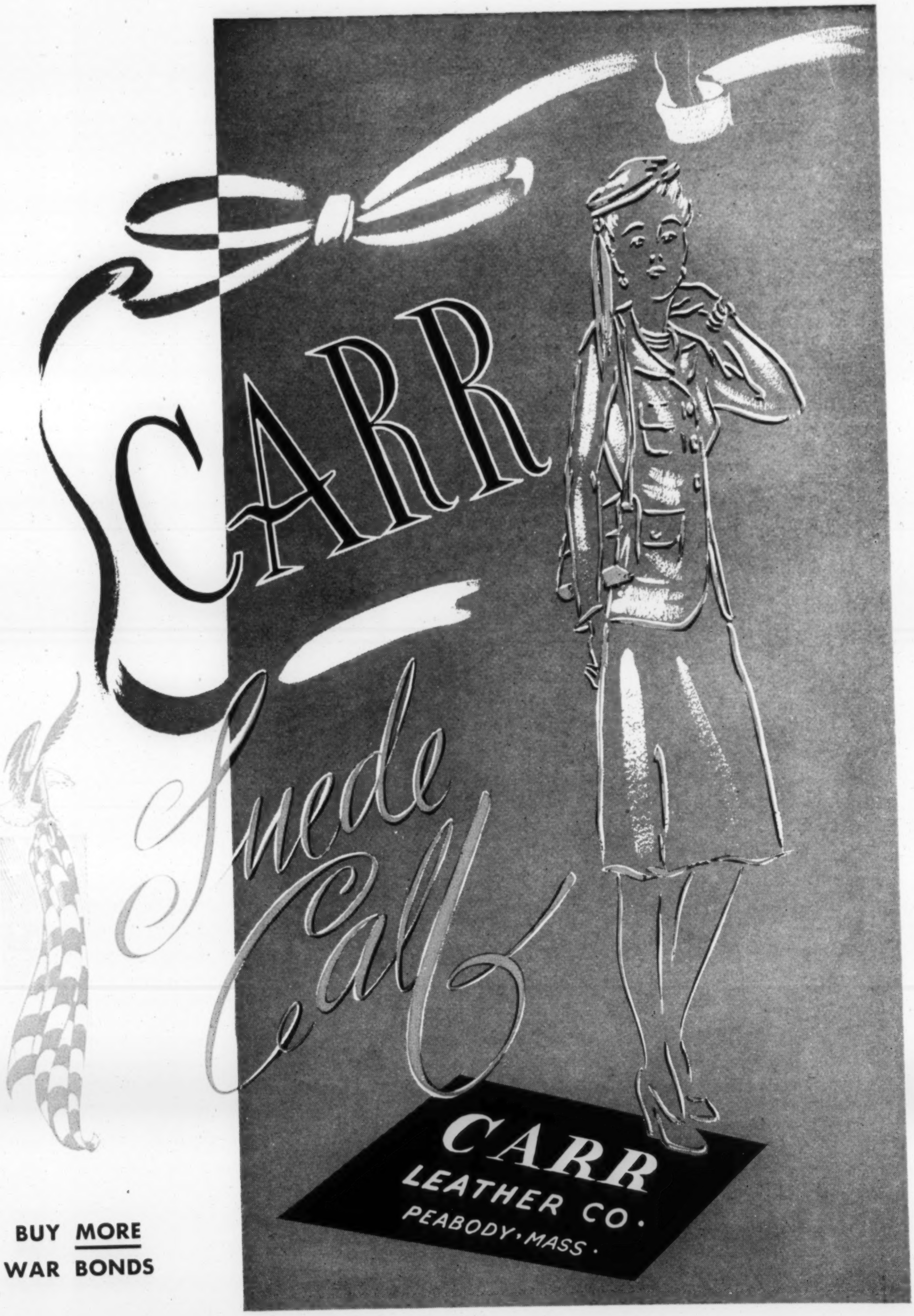
"Furthermore, the costs of producing so-called standardized shoes in the various parts of the country and by various manufacturers would vary materially because of different labor costs and methods of production and distribution. This would cause needless chaos in the industry without effecting any savings in material or manpower.

"Problems of production and distribution of standardized shoes were studied in Great Britain, where there are only a small number of manufacturers in a comparatively small country, and after such consideration have been discarded for the same reasons.

"In the event a standardized shoe program is adopted, and such standardized shoes under Government specifications are put into production, resultant inventory losses on this type of footwear would be devastating to the shoe industry, when it becomes no longer necessary to manufacture such standardized shoes.

"In summary, the committee is of the unanimous opinion that any shoe standardization program prevailing for the adoption and production of standardized shoes under Government specifications is impracticable of accomplishment. Such program would have the effect of limiting the fluidity of production so that the possibilities of leather savings through substitution of other materials and through simplification and reduction in styles will not permit the highly competitive industry to take advantage of such situations.

"Such a standardized shoe program would result in uneconomic use of raw materials and existing equipment and of new equipment which is unavailable. It would result in retarding automatic shoe style simplification and material and labor conservation now being established under the WPB program, and would injure both the shoe industry and consumers far more than it would help the war effort."


CARR
Suede Calf
CARR
LEATHER CO.
PEABODY, MASS.

BUY MORE WAR BONDS

SHOE FACTORY

A MONTHLY DEPARTMENT OF HIDE and LEATHER and SHOES

Absenteeism—A Wartime Problem

"TRAMP, tramp, tramp, the boys are marching . . ." The fellow who ran a machine yesterday has donned his uniform. He's proud of the khaki, even though it doesn't carry any gold bars, or stripes on the sleeve. After he's worn it a few days, one part of it becomes more important than any other—his shoes. They've got to get him through the rigors of basic training. Later they'll stand him in good stead on the icy stretches of some far-flung northern outpost or on burning desert sands.

His old job in the factory has been filled by someone else—perhaps a woman coming into industry for the first time. As our young men have entered the armed service, the demand for labor has brought into war plants many people who are unaccustomed to industrial life—not only women, but older workers, youngsters, boys about to be drafted, and people physically below par. Often wartime working and living conditions are especially difficult for them. They are giving their best efforts to their jobs, but sometimes reasons beyond their control make steady performance impossible. As more such workers enter war production, we shall have to come to grips with an increasingly important problem—absenteeism.

Absenteeism has always been present in industry. It is serious now because of war labor shortages. Unexpected vacancies on the production line cannot be filled fast enough to maintain output schedules.

Nobody really knows what "normal" absenteeism is or should be. A curbstone estimate has placed it at two or three per cent. The U. S. Department of Labor's Bureau of Labor Statistics estimates that the rate in manufacturing industries for March 1943 was 5.4 per cent, based on reports from nearly three thousand establishments employing over 1½ million workers.

The U. S. Department of Labor receives widespread requests from war industries for advice on methods of reducing absenteeism. Consequently, the Division of Labor Standards has summarized the experience of management in some 200 outstanding war plants in dealing with this problem.[1] This material indicates the methods of control tried at the plant level, and the degree of success which might be attained if these methods were more generally used throughout the country.

Absenteeism records among firms reporting ranged from none, except payroll records of time worked, to most elaborate periodic and detailed analyses of extent and cause. The primary purpose of records—whether they are detailed or simple—is to indicate the size of the problem and reveal the basic causes.

Most firms keep time cards for days worked. The unpunched time cards of employes scheduled to work indicate absentees. A simple count of these cards will show the number of employes absent by plant, department, shift, day, and usually sex. In order to have a common and comparable basis for measuring absenteeism in various plants, the Bureau of Labor Statistics of the U. S. Department of Labor suggests the following formula:

$$\text{Absenteeism} = \frac{\text{Man days lost}}{\text{Man days worked plus man days lost}}$$

A special article prepared for Hide and Leather and Shoes by the

U. S. Department of Labor

Division of Labor Standards

By figuring absentee rates in this manner, management can measure and analyze extent, time, departmental peaks and trends of absenteeism.

If data on unpunched cards are tabulated on individual employe record cards, the number of chronic absentees may be detected. An indication of causes can be secured by spot studies through interviews with returning absentees.

Recognizing that the control of absenteeism rests primarily with management, spokesmen for firms pooling their experience with the Division of Labor Standards stressed the importance of enlisting the cooperation of labor-management commit-

(Continued on page 26)

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[1] "Controlling Absenteeism—A Record of War Plant Experience" gives the full report on this survey and can be secured on request from the Division of Labor Standards, U. S. Department of Labor, Washington, D. C.

V-DAY IS COMING

and with i

NORTHWESTERN
DEERSKIN
ELKO

NORTHWESTERN LEATHERS

- Elko
- Sootan
- Kitchener
- Russide
- Chrome Custom
- Deerskin

Each day's fighting on the battle front, and every hour's production on the home front brings V-day that much nearer to realization. This war cannot last forever, and when the last of the victory parade passes the reviewing stand, merchants will turn again to business as usual in their stores. Rationing and priorities will be matters of the past, to be quickly forgotten in the improved business of the post-war period.

Northwestern Leather Company Trust

tees, unions, Government, and the community. Absenteeism cannot be reduced without teamwork from employes and the organizations representing them. It is important to explain to employes just how the product they manufacture is essential to the war effort. Firms have used various methods to awake their employes to the importance of their jobs.

S. M. Rowland of American Hide & Leather Co., Boston, says:

"I personally believe that one of our most effective means has been the use of illustrated posters showing the effect of absenteeism on production. We have also used bulletins bearing statements from leading Army and Navy officials such as the following: 'Part of the reason for the Russians' success is that they possess the right kind of footwear for winter fighting.' We have used such posters and bulletins quite extensively and I do not believe you can find a man in our employ who could not tell you where and how our military products are used."

Publicity on the importance of the job becomes ballyhoo, however, unless it is backed up by special attention to working conditions, supervision, and good scheduling and planning by management.

Many of these firms emphasize that so far as possible absences should be preplanned to permit replacement and prevent interruption of production. A New England chemical firm reports that preplanning absence ". . . is important because of the obvious problem of replacement. A general agreement is in force," in this plant, "whereby every employe is required to notify his foreman at least two hours before his scheduled time of duty if he is not reporting for work, and the company in turn is required to notify each employe two hours in advance if for reasons beyond their control his scheduled services will not be needed."

These companies also schedule work ahead and post such schedules for all workers to see. If workers know that work is laid out for them and that they are being counted on, they will hesitate to be avoidably absent. If they also know that the company has explicit and liberal rules with respect to excused absence, they will more willingly try to plan their absences in advance and notify their foreman.

The foreman has a strategic position in controlling absenteeism. In interviews with returning absentees, he can check closely on the real reasons for absence and report them so that management can try to ameliorate or remove them. He can convince absentees of management's sincere interest in their problems and can show them how important their regular attendance is to the war effort. He can also supply the disciplinary word to the frequent offender who cannot fool his own supervisor as easily as he may those officials who are more remote.

A rubber company says that its foremen report all absentee cases to the union shop stewards. "If there are any particular repeaters, they are talked to by the foreman and the shop steward with emphasis on their importance and necessity of being on the job and aiding in our war effort. We feel this individual talking to each offender brings more results than the use of bulletin board notices. We have also found that the union cooperates 100 per cent in trying to break down absenteeism."

H. M. Haskell of the J. F. McElwain Co. shoe factories in Nashua, New Hampshire, also says that the union is "trying conscientiously to help us." In a letter to employes the general manager pointed out that "your union representatives join with the company in urging you to reduce absences to a minimum for the benefit of everyone."

Shop stewards, union officials, and labor-management committees are invaluable in helping to reduce absenteeism if their cooperation is properly enlisted.

The foreman and the shop steward can work together in discovering causes for absences and disciplining the frequent offenders. Such measures are taking the place of penalty layoffs, which, employers say, impede production. As one employer points out, "In normal times the matter of appearing for work can be made a condition of continued employment, but we do not feel that it is conducive to the war effort, or to the best interest, to enforce such a rule under wartime conditions."

No amount of discipline, however, can prevent the major part of absenteeism, which is caused by such factors as illness, accidents, long hours resulting in fatigue, and the need for time off for essential shopping and business, and such community problems as inadequate transportation, housing, and child care facilities.

Many plants are attacking illness through their medical and first aid departments set up primarily to control industrial accidents and disease. Following a widespread survey, the National Assn. of Mfrs. credits adequate plant medical programs for a 30 per cent drop in absenteeism. Firms have also recognized that food habits have an important bearing on health and so have conducted educational campaigns on nutrition. Some of them, such as the Dow Chemical Co., operate plant restaurants where the food is carefully selected for its nutritional value. At least 30 minutes in which to eat the meal and get away from the bench definitely increases productivity.

Help in combatting accident and health hazards may be secured from the U. S. Department of Labor's National Committee for the Conservation of Manpower in War Industries, which operates through the Division of Labor Standards. Over 500 of the country's leading safety engineers have been enrolled on a voluntary part-time basis to assist war plants in organizing sound safety and health programs. More than two-thirds of the 10,000 plants serviced by this committee last year markedly reduced accident frequency as well as severity.

Long hours inevitably increase accidents and illness. Present hours schedules may be an added strain for workers already handicapped by home responsibilities or physical disabilities. The problem will demand more attention as the employment of such workers increases. It may be necessary to adjust such hours to meet their needs if their services are to be available to war production. This has been done in England and is under study by some firms in this country.

Transportation difficulties also rank high in the list of absentee causes. Some plants have "set up facilities for assisting workmen in solving their rationing problems," as one of them testifies, "without it becoming necessary for them to lay off from work for tires, gas, and other various details in connection with rationing, which was one of the major excuses formerly used. Our local rationing board has worked with us on this 100 per cent."

Where workers recognize the importance of their jobs and have the benefits of good living and working conditions, they are not as likely to be attracted away from their jobs by higher wages in munitions factories. The hide and leather and shoe industries are essential in this war, and in plants where absentee rates are high, this testimony indicates that management bears the chief responsibility for eliminating basic causes.

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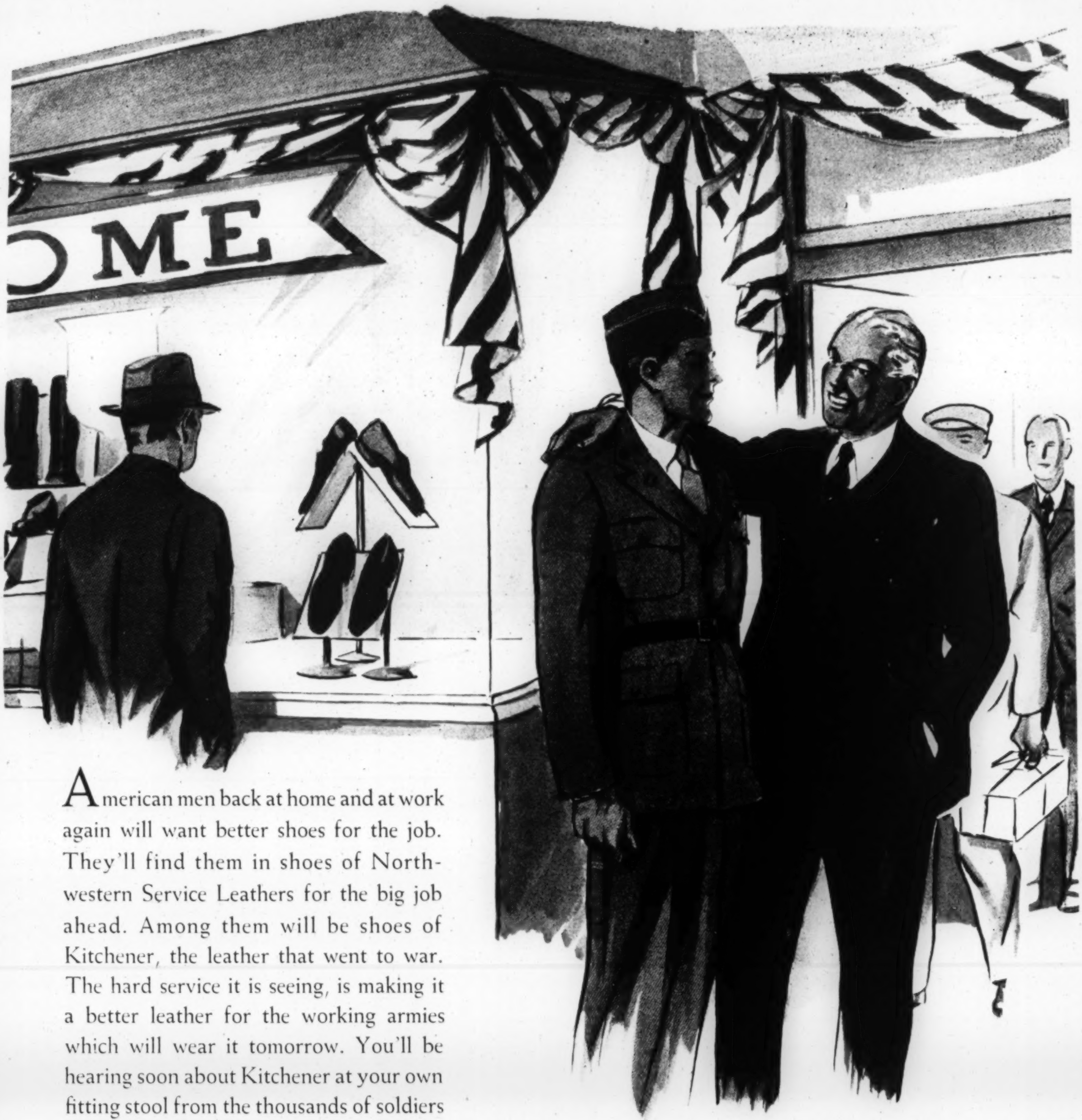
Northwestern Leathers return to civilian life



American men back at home and at work again will want better shoes for the job. They'll find them in shoes of Northwestern Service Leathers for the big job ahead. Among them will be shoes of Kitchener, the leather that went to war. The hard service it is seeing, is making it a better leather for the working armies which will wear it tomorrow. You'll be hearing soon about Kitchener at your own fitting stool from the thousands of soldiers who saw Kitchener at work on America's far-flung battle lines and war workers in our factories.

Specify Northwestern Leathers with Assurance of Service

BOSTON, MASSACHUSETTS

Shoe Industry Finds Absenteeism Has Many Causes; Fewer Remedies

ABSENTEEISM is a "war term" for the loss of time by workers who are away from their benches because of illness, the lure of better jobs, "playing hookey" or other causes. Because these workers are not on the job, production schedules in their plants are adversely affected in direct ratio to the percentage of absenteeism that exists at any one time or over any period of time. Absenteeism is serious business. To the worker it means loss of wages. To the manufacturer it means loss of production. To the Government it means loss of deliveries. To the armed forces it may mean loss of life because needed equipment and supplies showed up too late.

The U. S. Department of Labor, the War Production Board, and the War Manpower Commission are bending every effort to reduce the national rate of absenteeism by cooperating with individual employers and labor organizations. To this end the Labor Department has recently issued a booklet on "Controlling Absenteeism" and the WPB has published one of "Ways of Dealing with Absenteeism." These booklets have been made generally available and are one part of the Government's drive to reduce absenteeism.

The National Assn. of Mfrs. recently conducted a survey in 25 of its member companies' war plants and found that the wartime average of absenteeism in those plants has increased 56 per cent since the war effort started. The present percentage of absenteeism was found to be 5.42 per cent of workers, as compared to 3.48 per cent before the war.

Put baldly, this just means that after the war started and the materials were most urgently needed, workers stayed off the job in greater numbers than before the war—a situation, whatever its cause, which is a dark blot on the otherwise bright production record of management and labor.

The Office of War Information recently reported that war plants without systematic plans for reducing the causes of absenteeism have nearly twice as high a rate of job absences as those which do have such programs.

Analysis of absence records of 1800 workers showed:

1. Married women are absent most. Next come single men, then single women. Married men are absent least.
2. Those who had been on the job between three months and two years were most frequently absent. Next came those with less than three months. Least absent were the old hands with more than two years' experience.
3. New residents of a community are more often absent from the job than regular residents.
4. Workers who object to plant health or safety conditions, or lunch arrangements, or promotional policy are more frequently absent than satisfied workers.

More than half of the workers had specific suggestions in answer to the question what can be done to cut down absenteeism. The most frequent suggestions were for rearrangement of hours of work and not granting overtime pay for the week in which the worker is absent. Other suggestions: improve plant conditions, community conditions, wages, and productive efficiency, educate employes, reward regular attendance, discharge the absentees and put them in the Army.

Typical proposals for rearrangement of hours of work showed the workers were concerned with reducing long hours, or concentrating work so they will have afternoons or days to themselves. Some were:

"Give Saturday afternoon off:"
"Let everyone take a day off a month to take care of personal work."
"Permit one shopping day a month."
"Give workers vacations."
"Give five and a half days a week and work longer each day."

Because footwear and other military products of leather are of vital importance to the armed forces, and therefore their uninterrupted production is a matter of considerable concern, HIDE AND LEATHER AND SHOES has just completed a survey to discover actual experiences of employers in various parts of the country. In connection with this survey, the U. S. Department of Labor has also prepared for the magazine a special article on absenteeism as a national problem and as a shoe industry problem. This article appears elsewhere in this issue.*

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Location of Plant Is Contributing Factor

The location of the plant and the season of the year are contributing factors toward absenteeism, according to Mr. Horvit, one of the executives of the Daly Bros. Shoe Co. with offices at 15 East St., Boston.

"Our plant is located out in the suburbs," he said, "and our workers are also part time farmers. They have gardens, some live stock and because of this we have a few workers absent now and then. Generally speaking, however, we have very little trouble in this respect.

A report by

Alfred Henderson

of a Hide and Leather and Shoes' industry survey on absenteeism

"We keep our workers informed of the importance of their work and while we have no formal rest periods during the day our men and women knock off for sandwiches and soft drinks when the wagon comes around in the morning and afternoon. This has been going on for years, and we find it helps keep production up where it should be."

Higher Wages Lure Employes Away

The president of a plant making women's dress shoes and slippers reports: "Sickness, with contagious diseases heading the list, has hit us pretty hard. Milwaukee this winter and early spring has experienced much scarlet fever and measles in the epidemic stage. We were affected

(Continued on Page 34)

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*Editor's Note—The experiences of a number of leading tanners in various parts of the country—the absenteeism problem and methods used to overcome it—will be reported in a special article in an early issue of HIDE AND LEATHER AND SHOES.

Patina Adds Lustre to Evans' Escutcheon

BURNISHED with a patina of age, the proud escutcheon of the L. B. Evans' Son Co. of Wakefield, Mass., heralds the building of a shoe empire where six generations of sons have contributed their talent for more than a hundred years.

Carrying on the family tradition, that of making fine hand-turned footwear, and armed with an advertising slogan that has echoed around the world, Lucius Bolles Evans established the business in 1841. He called it the L. B. Evans Co. and his shop, the original factory, is now a residence and still stands as the old family homestead on Salem St. in Wakefield.

Although the company was actually established in that year Lucius was preceded by James Madison Evans who was making and selling shoes in 1832 and Thomas Evans and his sons, farmer-cobblers, who made and sold shoes in 1804.

Down through the years the sons have taken their places in the shop and in so doing established a precedent in the shoe industry, that of being the only family in the United States to manufacture hand-turned shoes since 1804 when Thomas made his first pair.

Hand-turned slippers and flat heel Congress boots with elastic gores were manufactured in those early days after the firm was established. Those boots were the ultimate in style with the Romeo brand being worn by the men and a dainty feminine Juliet model a favorite with the women.

A considerable amount of work such as stitching, etc., was farmed out to the small neighboring cobbler shops and the barter system was also in effect at that time. Records on the books of 1804 still on file show that on one day, two 200-pound hogs and a barrel of cider were accepted in payment for making a lot of shoes and slippers.

A feature by

John L. Lent

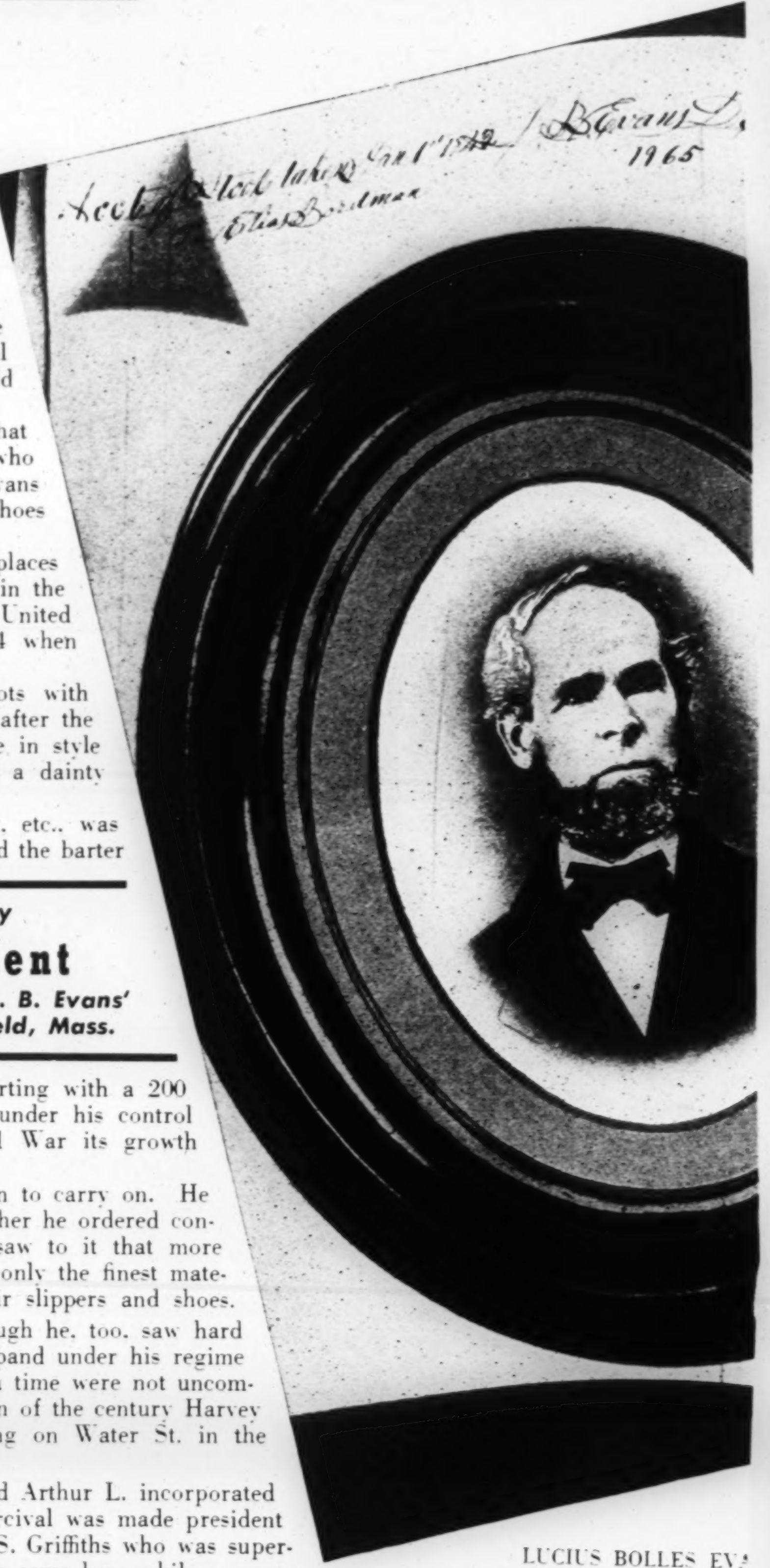
telling the story of L. B. Evans' Son Co., of Wakefield, Mass.

Lucius carried on the business for 40 years. Starting with a 200 dollar profit the first year the company prospered under his control and despite the hard times that followed the Civil War its growth was steady.

He died in 1881 and his son Harvey B. stepped in to carry on. He created new styles and added new lines. Like his father he ordered constant inspections all along the manufacturing line, saw to it that more attention was paid to detail and then made sure that only the finest materials available were used in the manufacture of their slippers and shoes.

Harvey watched the new century come in. Although he, too, saw hard times and slack periods the business continued to expand under his regime and orders for as many as 25,000 pairs of shoes at a time were not uncommon. Two salesmen were on the road and at the turn of the century Harvey moved the company to its present five-story building on Water St. in the heart of Wakefield.

At his death in 1905, his two sons, Percival B. and Arthur L. incorporated the firm and called it the L. B. Evans' Son Co. Percival was made president and Arthur was treasurer. Assisting them was John S. Griffiths who was superintendent at the time of Harvey's death. Mr. Griffiths came here while a young man from England and was hired by Harvey with whom he worked late into the evenings, eventually moving up from cutting room foreman to superintendent. It



LUCIUS BOLLES EV

Founder and owner from
1881 . . .

The case of the missing box toe heater

Neither Scotland Yard nor the Crime Club can solve it. Frankly, we're baffled. Read the evidence. If possible, find the motive and work out the solution.

GONE! Yet our records list it on loan and in use. Not to be found in lasting room, stock room, or cellar — gone into thin air! Last seen two months ago, wearing a copper overcoat, in the company of Old Man Hindsight, as vicious a villian as ever trod the boards in an Op'ry House meller-drammer.

Seriously, its loss is important. Not one, but hundreds of irreplaceable box toe heaters made from critical copper, stainless steel, brass, and cast iron have been lost by careless handling — usually through putting off their return until tomorrow as today seems short of minutes. We cannot make *new* box toe equipment for the duration. Our 1943 complement is being served to Messrs. Hirohito & Co. as part of an indigestible metal diet, and though our stocks are complete, we no longer have an abundant supply of heaters to cover needless shortages.

BUY BONDS FOR BLOCK BUSTERS

Box toe heaters are as important to you as they are to us. Don't lose them. Don't store them. When replaced for any reason, return them *at once.* Take care of them by following a few simple rules and add months to their span of efficient usefulness.

DON'TS for box toe heaters. (Please pass on to lasting room foreman.)

Don't operate electric heaters at voltages in excess of the unit resistance marked on each heater.

Don't operate heaters without water in boilers.

Don't carry water supply cans by the spout — use handle.

Don't fail to clean gas burners every six months.

Don't order units, water cans, and other supplies in excess of the amount actually needed.

Don't retain heaters not needed on the line.

Don't stock them "for the time being." Send them back.

BECKWITH MANUFACTURING CO., DOVER, N. H.

BECKWITH
BOX TOES

VICTORY ARMY E NAVY PLASTICS

footwear is known throughout the country and other parts of the world.

A hard soled hand-turned moccasin model for women has proven so popular with feminine war workers that the company is hard pressed to get them out in time to keep up with the demand.

Last year several thousand pairs of slippers were made for the Government. It is believed the slippers were for hospital wear and two standard models proved acceptable and passed all government tests.

While the company is proud of its product it is also proud of its loyal workmen. Out in the plant, fathers, sons, and grandsons work side by side. The Evans company is *their* company. "Why my father and his father, too, worked here," is the proud assertion of many of the young men now in the plant.

An annual vacation with pay is given all employes. They also receive group insurance and competent medical attention. Friendly discussions iron out shop or personal problems that are always taken to the office for hearing.

Due to the progress made in shoe manufacturing machinery the company has on various times changed its manufacturing set up. No change, however, has ever been made in the program that called for constant inspection to detail, or quality of material, or workmanship, and today as in the past you can still get "Good Shoes and Footwear at Salem Street."

Thus we pause to place a marker in this family album, a fine American album giving the history of a family and its business that was started when Stephen Foster was a boy, the Civil War 20 years in the future, and Wakefield just a tiny Massachusetts village called South Reading.

Absenteeism . . .

(Continued from page 27)

due to the fact that we employ married women; their children contracted the diseases, and were either quarantined or forced to stay at home to care for the children.

"Another thing: We are running a combination old men's home and kindergarten. The drain on our help due to the demand of the armed forces and the lure of high wages in war work forced us to employ old timers in the shoe trade. I have one man 70 years old working in the plant. Formerly he was in the shoe manufacturing business himself. This man, and others in the same age group of course are unable to hit the pace of the younger workers. They are slower and must take time off at intervals. They are more conscientious though.

"Then, too, we now employ young boys and girls under 18 years of age. By law they are required to attend Milwaukee Vocational School one day each week. They all do not attend on the same day; one may be absent Tuesday, another Friday, etc. This interrupts the even schedule of production, and we need them every day.

"Milwaukee is a major city in war material production, with many defense plants paying high wages. The high wages are a constant lure to the women and girl workers in our plant. They take a day off here and another there to look for war work. They know they can get work in any of the factories that are being drained of their man power by the armed forces. If they leave we are required to break in a replacement, and often after two or three weeks the replacement takes time off to look for war work, and again it is the same picture. On the matter of replacement, I had a young married woman at the plant in answer to an advertisement for help. She wanted the work, but had a very young child which would require considerable of the mother's attention. I knew that if she were hired she would be forced to take time off during the week to look after the child. Not only that, even after training her in the work, she would eventually be forced to leave, training time would be lost, and we would need another replacement.

"To fill vacancies within the plant we ran a three-day advertisement in a Milwaukee paper, stating no experience required. This brought 200 replies. So help is still available if you stress no experience required. But workers are very critical and expect everything from the employer.

"We have kept our production up, though we are four to five months behind in deliveries. We are taking no new accounts, and have certain territory now not covered by salesmen for that reason.

"To make up the time lost through absenteeism we work the plant overtime at time and one-half. Here we find the older age group workers more receptive than the young, with the older age group even willing to work overtime due to pride in their workmanship. But the young group want the money, and do not have pride in their work."

"Encourage Workers"

Arthur P. Sullivan, of the P. Sullivan Shoe Co., with offices in Cincinnati and plants in Georgetown and Bethel, Ohio, approaching the absenteeism problem realistically said that "like everybody else we have our headaches but what are the manufacturers going to do about it?"

"We try to encourage the workers to be regular on their job and all in all our situation is no worse than prevails in industry generally," he added. "The major absences come on Mondays following the Friday payday."

Sullivan takes a philosophical view of the situation with the explanation "of course we don't like it; but we've studied the problem, and considering the frailities of human nature there's not much need of trying to reform the world and make it stick."

Holidays Extended

Henry Dine, president of the Dine Shoe Co., Wakefield, Mass., when asked if his firm was having trouble said, "We've had a little during the past month. Our people have been working hard for the past two years. When a holiday arrives they sometimes fail to get back the next day.

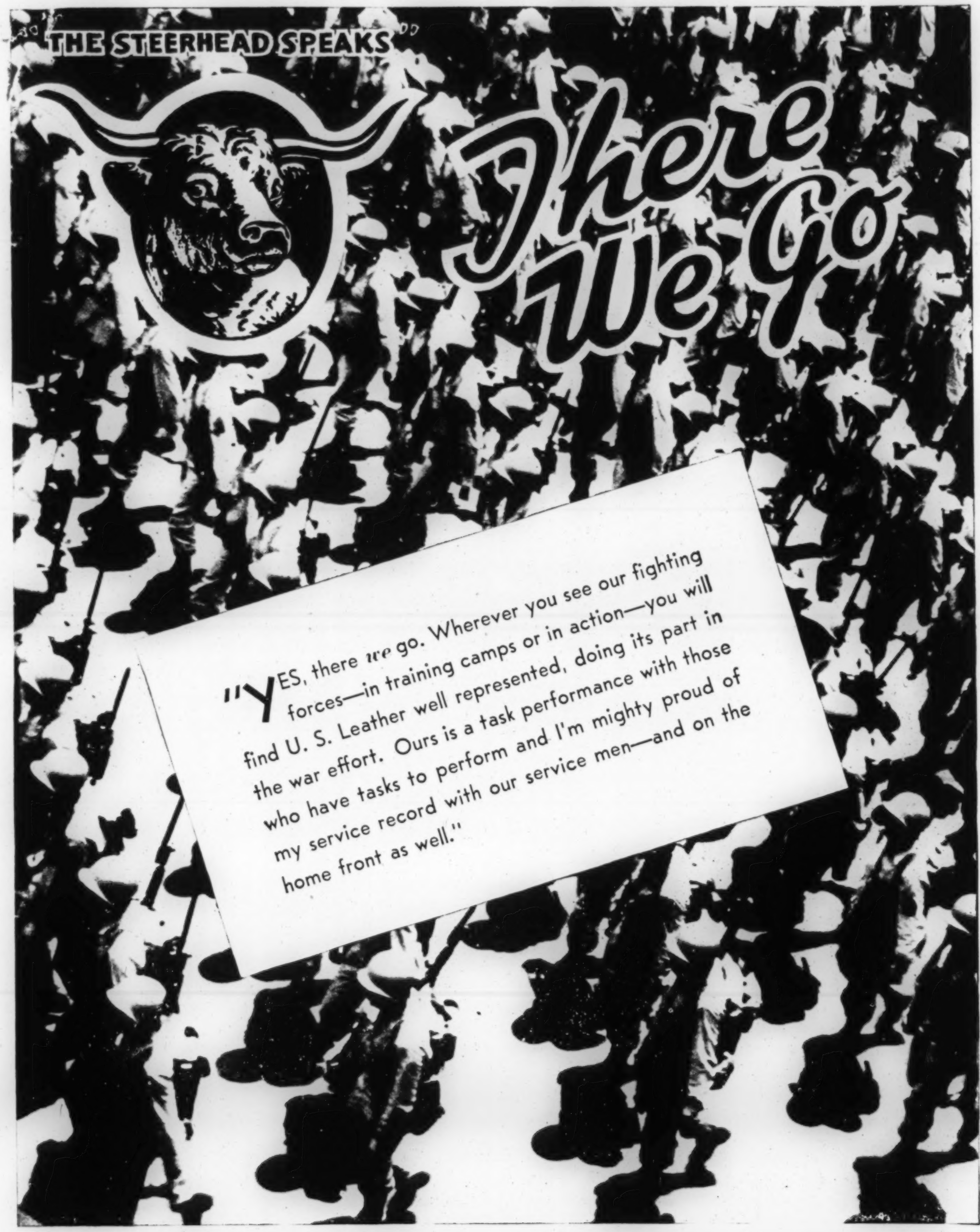
Then, too, they have their troubles the same as we do. There's sickness, operations and the usual things, now that a war is going on, to keep them out. I think the amount of absenteeism depends on how hard you drive your help. I do not approve of long hours and driving my men.

"Good pay, good working conditions and letting your help know that they are part of the business and appreciated go a long way toward ending absenteeism. All this pays in the long run and production does not lag."

Alfred Levine of the Levon Shoe Co., Malden, Mass., said: "Outside of illness we have had no absenteeism to contend with. We try to get the best of help and that's our biggest problem at the moment."

Says General Unrest Causes Absenteeism

The R. P. Hazzard Co., Augusta, Me., reporting that absenteeism is a problem at its factory, blames "general unrest; reading of strikes, high pay, etc." The company says the workers' attitude is frequently: "If others can, why can't I?" It also attributes the present high rate of absenteeism to "the usual swing of the pendulum, with labor in the ascendancy and management descending." It has employed posters, newspaper pages for workers every week, better food catering service, etc., but



"YES, there *we* go. Wherever you see our fighting forces—in training camps or in action—you will find U. S. Leather well represented, doing its part in the war effort. Ours is a task performance with those who have tasks to perform and I'm mighty proud of my service record with our service men—and on the home front as well."

THE UNITED STATES LEATHER COMPANY

NEW YORK • BOSTON • CHICAGO • ST. LOUIS • RICHMOND • CINCINNATI

McADOO & ALLEN
Philadelphia

NELSON-RONEY CO.
San Francisco

CUT SOLES HILLIARD & MERRILL DIVISION BOSTON says that it can see no improvement as a result of these efforts.

Mfr. Is "Greatly Concerned" Over Problem

The consensus of opinion among shoe manufacturers in the Portland, Me., district in regard to the problem of absenteeism, is that there is little or no hope of improving conditions, largely due to the fact that there are so many large defense plants in the locality paying such large wages that they cannot hope to offer sufficient inducements to counteract this condition.

J. A. Cordeau, president and superintendent of the Saco-Moc Shoe Corp., Portland, is greatly concerned over the problem and wishes to know if any other manufacturers have found a successful means of combating this problem. A shortage of nearly 100 workers from the number he usually employs makes absenteeism among present employes a grave problem. On an average there are from 10 to 20 employes absent daily, particularly on Monday morning. The fact that several processes in the manufacture of shoes require only one to four operators makes absenteeism of vital significance and there have been times when Mr. Cordeau, himself, has had to take over an operator's job to keep things going.

Deliveries Delayed

An indirect effect of absenteeism has been noted by a traffic man in a Milwaukee shoe plant. He informed:

"The slowing up of freight shipment movement has not been caused completely by the demand of railroad facilities for shipment of vital goods for the war effort. We have noted instances where absenteeism on the part of workmen engaged in the handling of freight, warehousemen, freight handlers, etc., have delayed the movement of our finished shoes. This resulted in delay in delivery to our accounts. Should a shipment into a distant city arrive on Saturday, and freight handlers decide to take Monday off, there is marked delay in delivery.

An official of a Milwaukee shoe plant manufacturing men's work shoes stated: "We had experienced considerable difficulty with absenteeism in our plant until about two weeks ago. Milwaukee has a great number of defense plants, and we found our workers, in instances, taking time off in order to look for work in these plants.

"To combat this tendency we posted notices in the plant to the effect that we would not pay overtime if the workers were late or absent during the week. We also discontinued a portion of the overtime entirely. This procedure resulted in marked curtailment of the absenteeism problem."

"After Payday Blues"

A spokesman for the Charles Meis Shoe Mfg. Co., Cincinnati, O., disclosed that this plant has no extensive absentee problem. "What little difficulty we have comes after the Friday morning pay off," he said.

He added that "for years we have made it a practice of paying our employes on Friday mornings and despite wartime conditions we have not yet seen fit to alter this policy. Sometimes a few of the workers do not report back to work after the noon luncheon hour, but the problem causes no great worry."

Contending that the absentee problem "is one of those things," the spokesman advised that "we try to talk to some of the offenders" but declared that "we have no real solution" and "try to just keep pitching."

"Government Should Clamp Down"

"The only workable method to cut down absenteeism is for the Government to step in, put more teeth in the Manpower Act and clamp down on workers who absent themselves from 'war-effort' jobs without real excuse," was the suggestion made by Ed Altman of the Altman Bros. Shoe Mfg. Co., with main plant in Cincinnati and a new fitting room just opened in Covington, Ky.

Altman believes that "the wage-earning opportunities in so-called 'defense jobs' lures workers from the shoe plants." He added that "cooperation of the employment officers in war plants in helping shoe manufacturers hold employes is not all that it should be, either."

Altman, however, said that he preferred to face "facts practically" and "as the shoe industry can't match war plants in wages, there's no great secret why workers search around for bigger-paying jobs, taking a day off now and then and thus aggravating the absentee problem."

Causing absenteeism, Altman listed sickness, "an old-fashioned bender," and "quest for more money" as prime reasons for absences.

"Monday Morning"

"Monday morning has been about the only day in the week that we have experienced much absenteeism," a men's shoe plant superintendent said. "Illness has been the cause, too, either illness of the worker, or with in his immediate family, or her family, requiring the aid of the worker at home. We do employ a number of married women, consequently some of this is expected. But, why should the absenteeism constantly occur on Monday morning? We have not been able to place a finger on the major causes of the problem."

"Week End Flings"

That men and boys in the lasting room have worse absentee records than other departmental employes was reported by a company spokesman at the Krippendorf-Dittman Co. plant in Cincinnati. Week-end flings, illness, and "other-job-hunts" were among reasons given for absenteeism.

"All in all," the spokesman said, "we are well satisfied with our record of employment steadiness. We are maintaining a high level of production and if we find ourselves falling short on the week, it means we merely put in some more overtime. That overtime is costly, of course, but what else can we do? We consider absenteeism one of the conditions of the wartime era."

Younger Employes Are Greatest "Sinners"

"Younger employes 'sin' more in absenteeism than do older workers," Nathan Stix, an executive with U. S. Shoe Corp., whose main offices are located in Cincinnati, reports. Stix said that his company, with plants in metropolitan areas and small communities, "found absenteeism about the the same irrespective of plant location." It did find that "the young blood" is more apt to "take off," especially after pay days when absenteeism rises as high as 15 per cent, than "older more stable and longer employed personnel."

"The absentee problem is pretty bad," Stix declared. "It is a real problem," he added, "and it gives us many headaches, and the only cure we know is to try to persuade, through the use of reason and common sense suggestions, that workers have a responsibility, too, in the war effort."

Stix declared that communities in which U. S. Shoe has plants were trying to give cooperation to the management in the fight on absenteeism but admitted "so far, the situation continues bad and we've not had a lot of luck in effecting a cure."

Mr. Steinwald, of the Roce Baby Shoe Co., Boston, said it is having more trouble getting material than with absent workers. "We employ mostly elderly people, they have been with us a long time, they are loyal and efficient workers. We let them know that we appreciate them and they in turn are seldom absent from their work."

William Viner, of Viner Bros., moccasin manufacturer, of Bangor, Me., reports that his company has experienced very little trouble from absenteeism. Mr. Viner states that the chief difficulty which his company has encountered thus far, has been in obtaining the necessary materials with which to keep the workers busy. The moccasin business, he said, has held up exceedingly well to date, but he is not too optimistic as to its future unless something is done to release the materials which are needed in manufacturing.

The rationing of footwear has caused considerable concern among the moccasin manufacturers who are living in the hopes that the OPA will remove moccasins from the ration list. Viner Bros. employs a great many handicapped persons in its factory, persons who can not fit into other lines of endeavor, and the rationing restrictions are bound to work hardship on these workers unless some relief is granted.

Pinchos Medwed, of the Medwed Mfg. Co., Bangor, Me., says that his company has experienced very little difficulty with absenteeism. The principal cause, in Mr. Medwed's estimation, is the irresponsibilty of workers. New workers fail to take their job seriously but are of the opinion that they can come in and work or stay out as suits their own inclinations. He states that among his older employes he has experienced no trouble at all from absenteeism. The Medwed factory is now being operated with about 50 per cent new employes, many of them persons who have never worked before.

Sickness Is A Major Cause

"Absenteeism has not been a problem at our plant," an official of a Milwaukee shoe plant pointed out. "Most of the time lost has been due to sickness. We check on every case of absenteeism, and have found illness to be the major cause. One of our officials keeps a constant check on all workmen. If there is any tendency towards repeated absenteeism on the part of individual workmen, they are given pep talks. On the whole, though, it has not presented a problem."

"Both sickness and other causes," informed the superintendent of a women's shoe plant, "have resulted in absenteeism in our plant. Most of it has been due directly to sickness. This we know is unavoidable. We check each case to determine the cause. If the offender does not furnish a legitimate excuse he or she must answer not only to the plant management, but to a union committee as well. This is one case where the union has greatly aided management. Time lost from work by an experienced workman means production interruption for his co-workers, so naturally the union committee investigates the case and the worker gets back on the job. This factor has cut down considerably on the absenteeism problem at our plant."

"As far as we have been affected," advised a representative of a women's shoe manufacturing plant, "the abuse has hit our plant in just a few spots. Sickness resulted in considerable work hours lost. However, the real offenders have been those who are receiving more money than they have in years. They do not know how to handle this augmentation of income. Instead of saving the money they spend it on amusements, and in particular on intoxicants. As a result

Machines not in perfect working condition can be as dangerous as dynamite to production schedules.

Get into the habit of calling in a B.M.W. Co. representative

BOSTON MACHINE WORKS
COMPANY
LYNN · MASSACHUSETTS

Whitman, Mass. Johnson City, N. Y. Columbus, Ohio Cincinnati, Ohio Chicago, Ill. Milwaukee, Wis. Kitchener, Ont. St. Louis, Mo. Westfield, N. J. Los Angeles, Cal.

they stay away from work until their heads clear somewhat. To combat the problem we give the offending workmen several strong lectures, and so far have experienced improvement of the situation."

Workers More Independent

G. Hogan, of the Beacon Hill Shoe Co., Boston, declared, "Workers are a lot more independent now than in the past. We try to give ours good working conditions, do not drive them and feel that six eight hour days make a full week. Of course some of them get out of line now and then and we have to check up on them but for the most part we have very few absent workers around the place."

Short Rests Help

"We have had very little absenteeism," declared Harvey Evans, II, president of the L. B. Evans' Son Co., Wakefield, Mass.

"The average man doesn't like to think he's the forgotten man in the plant. We see to it that he isn't. Then, too, we believe in rest periods during the day. You know that when you're working a short rest or change helps you to finish the job. That holds true with the men and women in our plant. This is especially true now that we are working more hours. All of us have been educated to the 40 hour week. The rest periods help overcome a tendency to let down and our production continues to stay up where we want it."

OUR MEN NEED
★ BOOKS ★

SEND
ALL YOU CAN SPARE

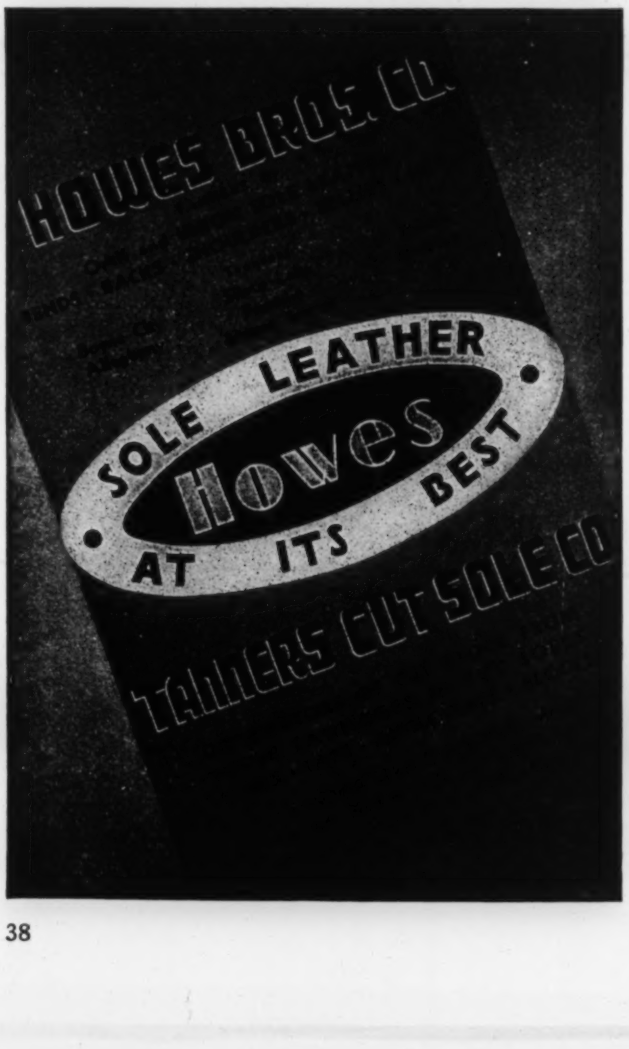
Help a man in uniform enjoy his leisure hours. Give your good books to the 1943 VICTORY BOOK CAMPAIGN. Leave them at the nearest collection center or public library.

Albert Levine, production manager, of the Murray Shoe Co., Cambridge, Mass., said, "Ads in the paper have been the main cause of absenteeism at our plant. We've had so little of it, however, we've done nothing to stop it as yet. In the event it gets worse we will take steps to prevent it."

L. H. Geiger, secretary of the Miller Shoe Co., Cincinnati, reports that "we're not bothered so much with absenteeism," and that such problems as have come up, concerned women workers.

"Male employes," Geiger related, "have a good record of employment. Most of our men are old-timers on the job and have been with us for years."

Absenteeism was recorded as "not much of a problem" at the L. V. Marks & Sons plant in Cincinnati. Julian Marks stated: "We have other problems which are bigger factors in our wartime worries than absenteeism." He attributed the fact that the Marks plant is "not too big" and added that many employes have been associated with the company for years is conducive to "a fairly good condition" prevailing.



SHARP EDGE CUTTING DIES

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TOOLS and DIES
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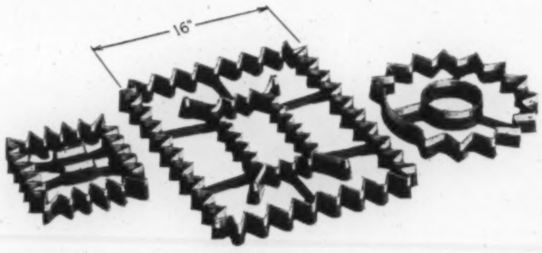
Machine Parts and Small
Special Machinery



38 years in St. Louis.

QUICK CAREFUL ATTENTION TO DEFENSE OR CIVILIAN ORDERS AND INQUIRIES.

INDEPENDENT DIE & SUPPLY CO.
La Salle Near Jefferson St. Louis, Mo.

SHOE FACTORY

A MONTHLY DEPARTMENT OF HIDE *and* LEATHER *and* SHOES

America Looks to Britain For Wartime Footwear Standards

By Alfred Henderson

SINCE the start of the war, the national economy of the United States has undergone many significant changes, and in the gradual changing from the untrammeled activities of peace to the closely regulated operations of war, the nation has very closely followed the economic pattern established earlier in England.

This is clearly seen in the five phases of control through which the British shoe and leather industry has passed since 1939: (1) Raw materials control; (2) limitation of supplies orders; (3) consumer rationing; (4) concentration of industry; (5) the utility goods scheme. Already the first three phases of control have been experienced by the shoe and leather industry in the United States; the other two are now in the discussion stage.

At this writing particular emphasis is being placed on the importance of "war model" or "utility" shoes to conserve manpower and leather for the armed forces, lend-lease, and essential civilian uses. Meetings of the shoe manufacturers industry advisory committee, the shoe retailers industry advisory committee, and officials of the War Production Board have discussed the possibilities of these models, which are reportedly favored by Office of Price Administration officials (H&L&S, Apr. 24). A representative of the OPA has said that war model shoes would: (1) place the most important leather in the most important shoe classes; (2) offer the consumer the opportunity of purchasing shoes containing a specified quality in a particular price line; (3) permit the adoption of more effective price controls in the shoe industry. A task committee of seven has been named to explore the possibility of a war model shoe and if such a shoe is found to be feasible, the committee has been asked to work out the most practical method for its production.

In view of this interest in "war model" shoes for the United States it is well to study the earlier development of Britain's "utility shoe" which is being offered as a guide to our own planning. And it is well to realize that Britain's "utility shoe" is *not* a single wartime model, and it is *not* a standard shoe. It is a development rather than a standard and it includes a considerable variety of styles with a broad general standard of production.

The question of utility footwear was approached in England in the summer of 1941, with the idea of simplfying production and distribution and eliminating waste of time and material involved in the production of an unnecessary variety of patterns and sizes of footwear, as well as providing good ration coupon value for boots and shoes.

During the winter of 1941-42 detailed utility footwear specifications were formulated after several months discussion involving manufacturers, buyers, the Director of the Boot and Shoe Research Assn., the Leather Control, the Director of Civilian Footwear for the Board of Trade, the Central Price Regulation Committee, the British Standards Institution, and other groups affected by the plan. Costings were worked out and manufacturers' maximum prices for each of 115 specifications agreed upon were fixed after protracted discussions with the industry about their rate of profit. A manufacturer charges a specified ceiling price, or his costs of production and sale plus five per cent, whichever is the lesser.

Extremely significant to American shoe manufacturers at this time is the fact that under Britain's utility shoe scheme *standard shoes are not produced.*

The specifications, giving maximum working particulars and minimum requirements relating to threads, fabric linings, fibre insole boards and stiffeners and toe puffs for boots and shoes, are just wide enough to allow manufacturers, without waste of useful labor or materials, to incorporate variation in design.

Men's utility boots and shoes are produced in 79 different styles; boys' in 20 styles; women's in 98 styles; and girls' in 28 styles.

This is a far different picture from the one which is tentatively being presented in many quarters here of a standardized war model shoe which will conform to rigid specifications and be designed only for service with a capital "S." Perhaps that isn't the sort of shoe scheme that is being planned, but that is the sort that is being talked about. And here again we see Britain's experi-

. . . and now it's

HALF A BILLION PAIRS

of shoes that have been made with COMPO equipment and adhesive

REG. U. S. PAT. OFF.
TRADE MARK

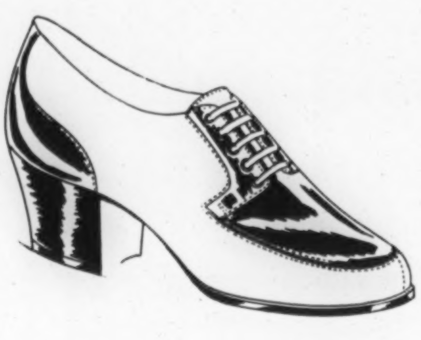
Production figures as of February 28, 1943 show that **501,703,993** pairs of shoes have been made by our licensees since the start of our business.

. . . and today

A SECOND FRONT WITH STURDY, DURABLE SHOES

Comfort, flexibility and wear—these and other advantages of Compo shoes mean more than ever today with service types so much in demand. Compo Shoes hold their shape better and longer because they stay on the last throughout production. Their flexibility, trim lines, superior fitting quality are appreciated by every woman whether she drives an ambulance or works at a lathe. *Compo Shoe Machinery Corporation, Boston, Mass.*

COMPO MAKES THE MACHINERY THAT MAKES THE BETTER SHOES



One of Britain's two-tone utility shoes made of tan reversed calf with brown calf facings, vamp plug, and quarter.—Haynes & Cann, Ltd.

ence being duplicated on this side of the Atlantic. A year ago, the British *Footwear Organiser* said editorially:

"Utility footwear, now looming on the trade horizon, has been defined as an attempt on the part of the government to conserve labor and materials by forcing manufacturers to employ both in making a wide variety of shoes that no one will buy unless compelled by sheer necessity.

"That definition may be unkind; but it has at least the merit of being fairly accurate, for it is an essential part of the scheme that shoes produced under it should attract no one but the person actually in need of essential foot covering.

"In other words, to whatever extent it may be forced upon a reluctant industry, its effect must be to stifle, for the duration of the war, and as long after as need be, a great part of the demand for shoes which has been built up so laboriously over many years by the most ingenious possible use of new designs, attractive materials, and novel methods of construction."

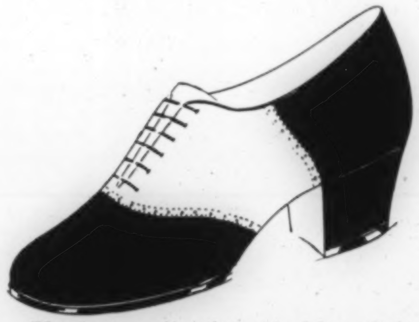
It is easy to see that in England there were followers of the philosophy of conservation by deglamorizing just as there are in our own official circles. The deglamorizing method didn't appeal overmuch to the British trade paper, for its editorial continued:

"So far as war needs demand, without limitation, the industry will reconcile itself to restriction of normal activities and will loyally try to give the public service of the kind circumstances require. There is, however, a very real danger with all such schemes that their sponsors, imbued with an excess of zeal, may apply them more widely than is at all necessary, and in so doing may inflict quite needless harm of a permanent kind."

The British view of "utility shoes" can be followed further by reference to an editorial in the *Footwear Organiser* for July, 1942, which asks:

"What has gone wrong with the much publicized utility footwear scheme? Why is it that after so many months of bureaucratic 'planning,' the public still cannot buy any of those promised shoes which were to effect such economies of material, save labor for the national war effort, and at the same time provide footwear that would last longer and cost less than any which the industry could be trusted to produce without interference? . . .

"Now, it seems, manufacturers are to be allowed to put the 'utility' stamp on their ordinary lines, provided they comply with some one of the many specifications evolved. In other words, it is becoming increasingly obvious that, with very few exceptions, the industry has always given the public superlatively good value; and that, if left to itself, it would continue to do so, faster, cheaper, and with infinitely less confusion than when subjected to bureaucratic interference."



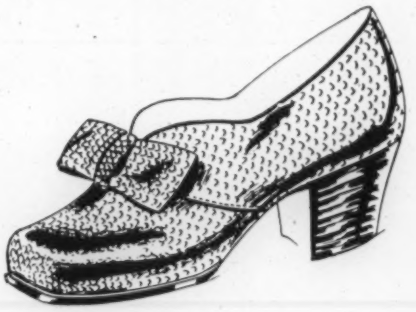
This brown calf utility oxford has a light brown grained calf saddle.—Bruce Church, Ltd.

In the same month, utility shoe standard specifications were issued by the British Standards Institution in a set of books covering girls' shoes; men's and women's shoes; men's, women's, and boys' heavy boots; women's boots and shoes; men's boots and shoes; boys' boots and shoes; and infants' walking shoes. The immediate trade reaction was that as a whole shoemaking under the utility scheme "will be much as usual."

The British apparently have had the same experiences with advance publicity concerning wartime clothing designs that we have had here. A trade observer commented that there was far too much ill-timed publicity—the story was released far too early—and on the whole it was very bad publicity at that. In the absence of facts or official guidance, the journalists sadly misinterpreted the purpose of the whole plan, and wrote scare articles giving the reader the impression that all utility merchandise would be shorn of style interest.

The British utility scheme does not, contrary to some opinion prevailing in this country, require the substitution of "war models" for "style models." In fact, it is estimated that only about 50 per cent of British shoes will be "utility models" under the scheme—the rest, if we are to judge from descriptions and illustrations of current British styles, will rival any models that were produced and sold before the war. Furthermore, the extent to which utility shoes will be made and sold in England is dependent largely upon consumer acceptance — not upon governmental regulation. In cooperation with the government's conservation efforts, British shoemen are making every effort to *sell* utility shoes, stressing their desirability as "service shoes," their economy, and their wartime styling. The regulatory measures applied to the shoes require only that shoes bearing the utility mark must conform to standard specifications and must be priced in accordance with government regulations. In other words, after all the talk that took place and all the planning that preceded the introduction of the utility shoe, the result was simply that the trade was given certain war styles and specifications and the prices that would be permitted for these shoes.

In fact, the British utility shoes are made with style details that are not now permitted in any shoes made in the United States under the restrictions of M-217.



This utility model is made of reptile grained calf with a matching bow.—Liberty Shoes, Ltd.

This is easily seen by a quick glance at the representative utility shoe models shown in the accompanying illustrations, or by a glance through current issues of British shoe trade magazines.

Utility shoes are offered in two tones with saddles, bows, collars,

A LIST OF OUR LICENSEES

ɔan Inc....................Boston, Mass.
ȝy Shoes, Inc..............Everett, Mass.
.ied Novelty Shoe Corp. (*American Girl*) Springvale, Me.
rao Shoes, Inc...........New York, N. Y.

& B. Shoe Co................Chicago, Ill.
& C. Shoe Co...........Manchester, N. H.
rr & Bloomfield Shoe Mfg. Co. Seabrook, N. H.
rrett Shoe Co., (*Br. Gen. Shoe Corp.)*
Betty Barrett)..............Frankfort, Ky.
acon Hill Shoe Co...........Boston, Mass.
ckerson Shoe Co., Inc.....Methuen, Mass.
ker & Friedman Shoe Co., Inc. Brooklyn, N. Y.
st-Ever Footwear Co. . . Montreal, Quebec
verly Shoe Co., Inc.............Lowell, Mass.
ckford Shoe Co.......Jamaica Plain, Mass.
n-Tell Footwear Corp...New York, N. Y.
ourbeuse Shoe Co..............Union, Mo.
oyd-Welsh, Inc. (*Peacock Brand*) St. Louis, Mo.
auer Bros. Shoe Co. (*Paradise Shoes*) St. Louis, Mo.
own Shoe Co., Inc. (*Odette*) Caruthersville, Mo.
own Shoe Co., Inc. (*Capitol Shoemakers*) Charleston, Ill.
own Shoe Co., Inc. (*Naturalizer*) Mattoon, Ill.
own Shoe Co., Inc. (*Trip A Long*) Murphysboro, Ill.
own Shoe Co., Inc. (*Robin Hood — Buster*
rown)........................Sullivan, Ill.

an Ltd., Sidney ....Toronto, Ontario
lisle Shoe Company..........Carlisle, Pa.
lton Shoe Corp........New York, N. Y.
mo Shoe Mfg. Co............. Union, Mo.
tral High School of Needle Trades New York, N. Y.
remont Sandal Co.......Claremont, N. H.
rk Shoe Co....................Auburn, Me.
ment & Ball Shoe Mfg. Co. Baltimore, Md.
e Company, B. E.............Norway, Me.
nrad Shoe Company. . No. Abington, Mass.
pley Shoe Corp..........Wakefield, Mass.
ronet Shoe Corp.........Haverhill, Mass.
rt, Thomas, Ltd...........New York, N.Y.

lsan, Inc................Dolgeville, N. Y.
rtmouth Shoe Co.........Brockton, Mass.
butante Footwear, Inc.. New York, N. Y.
lbey Shoe Corp..............Lowell, Mass.
rman Shoe Co...............Milford, Mass.
kerson Co., Walker T., The (*The Archlock*
hoe)........................Columbus, Ohio
nn & McCarthy, Inc., (*Heel Hugger*) Auburn, N. Y.
nn & McCarthy, Inc., (*Enna Jettick*) Binghamton, N. Y.

co Shoe Co..................Boston, Mass.
ias Bros., Inc.............New York, N. Y.
kin Shoe Co., Newton (*Pandora*) Philadelphia, Pa.

lcon Shoe Co., Inc..........St. Louis, Mo.
leck & Lamkay, Inc......New York, N. Y.
wn Footwear............New York, N. Y.
rn Shoe Co.............Los Angeles, Cal.
sher Shoe Co..............Hudson, Mass.
orsheim Shoe Co., The (*The Florsheim Shoe*) Chicago, Ill.

Fox Shoe Mfg. Corp. ......New York, N. Y.

Gardiner Shoe Co., The......Gardiner, Me.
Garofalo Mfg. Corp., E.....Brooklyn, N. Y.
Gelburn Shoe Mfg. Co., Inc. New York, N. Y.
Gerber Shoe Co............Lawrence, Mass.
Gloria Shoe Co., Inc.........New York, N. Y.
Gold Seal Shoe Corp. (*A. S. Beck Shoe Corp.*) Boston, Mass.
Gramercy Footwear, Inc....Brooklyn, N. Y.

Hallowell Shoe Co..........Hallowell, Me.
Hamilton, Scheu & Walsh Shoe Co. St. Louis, Mo.
Hartman Shoe Mfg. Co.....Haverhill, Mass.
Henriett Shoe Co., Inc........Boston, Mass.
Holtz Shoe Co., Inc., Herbert Haverhill, Mass.
Howard Shoe Co., Inc.......Haverhill, Mass.

International Shoe Co........De Soto, Mo.
International Shoe Co. (*Poll Parrot, Weather Bird, Red Goose, Vitality*).........Flora, Ill.
International Shoe Co. (*Pennant Division*) Mexico, Mo.

Jay Shoe Mfg. Co.........Cambridge, Mass.
Jerro Brothers...........New York, N. Y.
Jersey Footwear, Inc........Paterson, N. J.
Johansen Bros. Shoe Co......St. Louis, Mo.

Kane, Dunham & Kraus, Inc., Washington, Mo.
Kent Shoe Corp. (*A. S. Beck Shoe Corp.*) Haverhill, Mass.
Kesslen Shoe Co...........Kennebunk, Me.
Keystone Slipper Co.......Philadelphia, Pa.
Kimel Shoe Corp...........Claremont, N. H.
Klev-Bro Shoe Co.............Derry, N. H.
Kleven Shoe Co..............Spencer, Mass.

Lauer, Max...............New York, N. Y.
Lester Shoe Co...............Chelsea, Mass.
Lown Shoes, Inc..................Auburn, Me.
Lynn Independent Industrial Shoemaking School.......................Lynn, Mass.

Mackey-Starr, Inc..........New York, N. Y.
Manistee Shoe Mfg. Co.....Manistee, Mich.
Marino, John.............New York, N. Y.
Maybury Shoe Co..........Rochester, N. H.
Menihan, Corp., J. G.......Rochester, N. Y.
Metropolitan Shoemakers, Inc...Chicago, Ill.
Middletown Footwear, Inc. Middletown, N. Y.
Milius Shoe Co................Festus, Mo.
Milius Shoe Co., (Locust St.)..St. Louis, Mo.
Milius Shoe Co. (O'Fallon St.) (*Life Stride*) St. Louis, Mo.
Miller & Bergman........New York, N. Y.
Miller-Hermer, Inc. .....Salmon Falls, N. H.
Miller & Sons, Inc., I. (*I. Miller Beautiful Shoes*)............Long Island City, N. Y.
Mitchell Shoe Co., Inc.......Biddeford, Me.
Modiste Shoes, Inc.........New York, N. Y.
Monarch Shoe Co.........Cambridge, Mass.
Muskin Shoe Co., The.......Millersburg, Pa.
Mutual Shoe Co...........Marlboro, Mass.

Pacific Shoe Co., Inc. ....San Francisco, Cal.
Palizzio, Inc...............New York, N. Y.
Palter-De Liso, Inc. (*Palter de Liso*) New York, N. Y.
Paramount Shoe Mfg. Co......St. Louis, Mo.
Paramount Slipper Co., Inc. . Garfield, N. J.
Pearl Shoe Co............Philadelphia, Pa.

Pincus & Tobias, Inc. (*Urbanites*) New York, N. Y.
Plymouth Shoe Co..........Middleboro, Mass.
Premier Shoe Mfg. Co., Inc..Brooklyn, N. Y.
Preston Shoe Co................Lynn, Mass.

Radeschi, Inc., M..........New York, N. Y.
Rao Bros. Footwear Corp...Brooklyn, N. Y.
Rice-O'Neill Shoe Co........St. Louis, Mo.
Robern Shoe Mfg. Corp....New York, N. Y.
Rondeau Shoe Co., H. O...Farmington, N. H.
Rope Soles, Inc., (*Ropeez*) . . . . Paterson, N. J.
Rosenthal & Doucette, Inc...Beverly, Mass.

Samuels Shoe Co. (*DeLiso Debs*) St. Louis, Mo.
Sarra-Sandler Shoemakers, Inc., Lynn, Mass.
Savoy Shoe Co., Inc. (*A. S. Beck Shoe Corp.*) Elizabethtown, Pa.
Sbicca, Inc....................Philadelphia, Pa.
Scacco Footwear............Hoboken, N. J.
Scholnick Shoe Corp. . . Jamaica Plain, Mass.
Sedco Shoe Mfg. Co............Sedalia, Mo.
Selby Shoe Co., The (*Styl-eez — Tru-Poise*) Portsmouth, Ohio
Selwyn Shoe Mfg. Corp. (*Jolene*) Boonville, Mo.
Setroy, Inc.................New York, N. Y.
Sewanee Shoe Corp. (*Br. General Shoe Corp.*) Cowan, Tenn.
Shapiro Bros. Shoe Co., Inc. . . . Auburn, Me.
Sherman Footwear Corp........Lynn, Mass.
Simplex Shoe Mfg. Co. (*Flex-Eze*) Milwaukee, Wis.
Smith Shoe Co., G. Edwin, The (*Nisley Foot Youth*)...................Columbus, Ohio
Smith Shoe Co., J. P. (*British Walkers*) Chicago, Ill.
Somersworth Shoe Co., Inc. Somersworth, N. H.
Springstep Inc...............New York, N. Y.
St. Louis Shoe Mfg. Co. (*Victoria Cross*) New Athens, Ill.
Stein-Sulkis Shoe Co.......Haverhill, Mass.
Sterling Shoe Co., Inc.........Auburn, N. Y.
Strassburger, Inc. E. H. . . . New York, N. Y.

Tailorcraft Shoe Co., Inc. . New York, N. Y.
Tupper Shoes, Inc..........New York, N. Y.

Unique Shoes, Inc...........Brooklyn, N. Y.
United States Shoe Corp., The (*Gold Cross, formerly Red Cross*)..........Chillicothe, Ohio
United States Shoe Corp., The (*Gold Cross, formerly Red Cross*).........Cincinnati, Ohio
United States Shoe Corp., The (*Gold Cross, formerly Red Cross*)..........Greenfield, Ohio
Unity Shoemakers Corp.....Haverhill, Mass.
Universal Shoe Corp...........Sanford, Me.

Valley Shoe Corp. (*Valcraft*)...St. Louis, Mo.
Vanity Shoe Co..................Lynn, Mass.
Vardaman Shoe Co..........Owensville, Mo.
Victory Shoe Co..............St. Louis, Mo.

Ware Shoe Co.....................Ware, Mass.
Waverly Shoes, Inc.........New York, N. Y.
Webster Shoe Corp..........Webster, Mass.
Wellco Shoe Corp........Waynesville, N. C.
Windsor Shoe Co. (*A. S. Beck Shoe Corp.*) Littlestown, Pa.
Wise Shoe Co., Inc............Exeter, N. H.
Wolff-Tober Shoe Mfg. Co....St. Louis, Mo.

Zuckerman & Fox, Inc......New York, N. Y.

REG. U. S. PAT. OFF.
COMPO
TRADE MARK

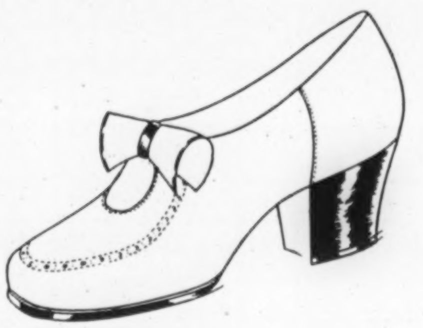
contrasting piping, contrasting stitching, overlays, stripping, overlapping tongues, and with similar ornamentation. Regular lines of shoes still feature high heels, wedge heels, platform soles, fancy bows, collars, and most of the fashion details that were common before the war. Both utility and regular shoes are regulated by restrictions on the use of metals, etc., and the sole leather situation has greatly increased the number of wood soled shoes that are shown.

At a distance, the net result of England's utility shoe scheme seems to be the encouragement of manufacturing of good looking, serviceable shoes that would be in considerable wartime demand anyway, without governmental fanfare, because they are the type of shoes that would be wanted by consumers engaged in war production work and in the numerous voluntary activities connected with the civilian war effort. The British program is designed to conserve materials and control prices, but so far as regulation of styles is concerned, it seems to give designers, manufacturers, and retailers a far freer rein than they now have here to create and produce the shoes that are most wanted — serviceable shoes for war activities, and fancy shoes for dress wear.

Like the early stages of the British program, the trade here is being confused by much talk of standardized styles and war model shoes. It seems that much of this confusion is as unnecessary here as it was a couple of years ago in England. The shoe industry is as patriotic as any other. It is willing to accept any restrictions that will help the war effort in any way. But it is not willing to accept without protest restrictions that are unnecessary and that do more harm than good.

The shoe industry has a tremendous stake in fashion. Since World War I it has become one of the leading fashion industries and has spent many millions of dollars in the development and promotion of styles, materials, colors, and types for every occasion of wear.

Before too much time is taken up with the standard or war model shoe shoemen in general will certainly hope that the objectives of the program are well studied, and that the mistakes of Britain's long discussed utility shoe scheme are not repeated while striving for the three-point objective cited by the OPA official, an objective which resembles closely that which was set for the utility shoe in England.



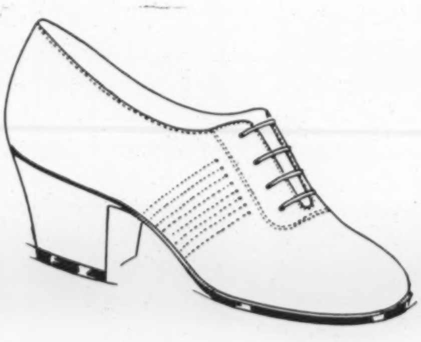
Black suede utility shoe with calf trim and heel cover, bow is piped with calf.— Hutton Shoe Co., Ltd.

In each case, the avowed purpose was to provide more serviceable footwear for the consumer, at a controlled price, and with the saving of as much leather and materials as possible.

While the WPB and the OPA and the new "task committee" struggle with the intricacies of war models, the shoe industry will find of interest the comments of a leading British shoe manufacturer who greeted the completion of the utility shoe program with the query: "Is the utility scheme a futile compromise?"

It may wonder whether it will be possible to work out here, with far greater problems of fashion and construction variety to cope with than prevailed in the British industry even before the war, a simpler and more effective scheme than the utility shoe. The English manufacturer observed:

"As a result of long and protracted discussions, the utility scheme as it now stands is neither one thing nor the other. It makes trouble and difficulty and achieves little. If the country can only afford labor and materials for plain shoes during a war, let the government say so. Then we will produce plain lace, bar and tie shoes on low and medium heels. Six pieces, plus tongue or bars, to a pair and you would get the maximum output with the minimum use of labor and materials . . .



Fine stitching creates a saddle effect in this red brown grained leather utility oxford.—Bruce Church, Ltd.

"There is no satisfaction to anyone to have to try and work an elaborate scheme; to be badgered by government officials, and yet feel all the time that it really achieves nothing. If we *can* afford fancy shoes, let's make them; if we *can't* then stop them and withdraw all possible labor. The utility scheme is a bad compromise."

This manufacturers' comment was typical of many opinions expressed in the British shoe industry following the introduction of utility shoe standards. In this country there are many shoemen who believe that the regulations which have already been placed in effect controlling footwear have been too weakened by compromising to accomplish their purpose and that not enough attention has been given in the final decisions to straightforward considerations of what the industry *can* and *cannot* afford to do under wartime conditions. Many of the restrictions of M-217 are obvious compromises, and the discussions of "war models" that have taken place so far have from all reports been tangled in a confusion of compromising.

According to the British manufacturer, the utility scheme "tries to control minimum quality standards of materials. This could more easily have been done by making a general direction to the trade and giving retailers the opportunity of submitting any shoddy shoes to a competent committee. If any manufacturers were found continually supplying bad-wearing shoes they should have their Nucleus Certificate and leather licenses withdrawn. Nobody with any sense wants to make unsound shoes today. The public wants good shoes and is willing to pay for them.

"The utility scheme also controls prices and costings, but this could just as easily have been done through the already existing Price Regulation Committee.

"The utility scheme proposes to give (1) sound footwear; (2) reasonable price; (3) simplification of design; (4) saving of labor.

"If the Boot Mfrs. Federation had been given the brief outline of what was wanted, they, in conjunction with the factors and retailers, could have worked out and themselves applied a scheme more quickly and more efficiently than what has been

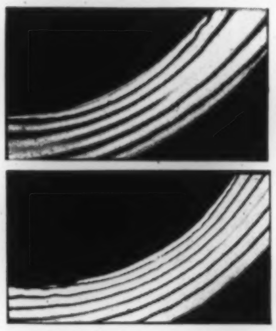
NO "SLACKER" SOLES FOR U.S. FIGHTING MEN

BUT TREMENDOUS DEMAND MEANS MIGHTY LITTLE BEST QUALITY LEATHER FOR CIVILIAN USE . . . AFTER MILITARY REQUIREMENTS

There are no "slacker" soles on the shoes worn by our fighting men these days! The *best* selections of England-Walton FIBRE-SORTED Soles are going *first* to the Armed Forces. Like other suppliers, we are cooperating to the hilt, in quality as well as quantity.

And yet, *all* grades of E-W soles are E-W FIBRE-SORTED, and whatever grades you are still able to buy for civilian shoe production, you will get the same *even* strength and *equal* flexibility that expert fibre-sorting provides.

POLARIZED LIGHT SHOWS IMPORTANCE OF "FIBRE-SORTING"



These pictures indicate how the fibres of soles tend to vary, depending on what part of the hide they came from. Different lines of strain cause uneven wear, contribute to shoe failure. Fortunately, after years of experience and exacting standards, E-W sorters can tell at a glance whether two soles came from the same place on the hide—whether or not they are FIBRE-SORTED.

The best selections of E-W Fibre Sorted Soles, now largely "in the war for the duration", will again be available after the war to give you—both manufacturers and retailers—that extra sales point you will need to sell new peace-time markets.

ENGLAND WALTON
fibre-sorted soles
CUT SOLES AND ... LEATHER
PURE OAK BARKTANNED

England Walton Division

A. C. Lawrence Leather Co.

Boston, Camden, Peabody, New York, St. Louis, Columbus, Milwaukee, Los Angeles, San Francisco
Ashland, Ky., Newport., Tenn., Hazelwood, N. C.

pushed on us by government officials. The government does not seem to realize that all are anxious to help the war effort, and the trade, through its own organization, could and would fairly and conscientiously carry out the government's wishes. The only suggestion I can make as to how the scheme is to be made more workable is to give manufacturers all the details and leave them to absorb them. Then see that they are carried out without too much hair-splitting over minute details of specification."

At this writing, nine months after the introduction of the utility shoe in England, British shoe fashions in general have been subdued into simpler lines, with smartness more evidenced than millinery detailing. But many of the high style retailers have not yet stocked utility shoes because they believe their customers will not buy them so long as a wide variety of "free fashions" is available. And manufacturers continue to make and advertise a pleasing variety of two color shoes, platform soles, wedge heels, medium high heels, collars and appliques, and similar fashion presentations that have been dimmed out in the United States.

"How to Lose the War" Posters Stimulate Production

DISCOVERING that employes who formerly had worked at breakneck speed were developing a complacent attitude about their work, a western shoe manufacturing plant loaded with heavy naval and military contracts took several steps to counteract it. First, short rest periods to prevent monotony and fatigue were allotted every hour. Second, rewards for the best production and prevention of waste were provided as an incentive. Third, the management hung up a huge sign in the center of its main plant entitled "How to Lose the War," humorously calling attention to growing habits of employes which cut down on factory efficiency.

Of the three methods, the sign has proven most valuable, the company states, simply because it brings a grin from everyone who reads it, and lettered on both sides, is visible the length of the building.

The message, in red letters on a white background, reads "HOW TO LOSE THE WAR."

1. Report to work late; stall around, spend at least one hour of each day in the rest room or gabbing at somebody else's machine.

2. Keep continuously finding fault with those who pass work to you; low rate everybody and anything connected with your production.

3. Ask stupid questions; ignore your superiors and be sure to go over their heads. You know more than they do.

4. Knock off for lunch at least ten minutes before the designated time. Practice being extremely busy and interested in your work one-half hour before quitting time only.

5. Be a social planner. Plan your dates and trips with the girls in the factory. If the job's behind time—to heck with the job. Don't let our

"B" as in Boston, "M" as in Machine and "W" as in Works . . . that's the way to spell the answer to production problems.

Get into the habit of calling in a B.M.W. Co. representative

BOSTON MACHINE WORKS
COMPANY
LYNN · MASSACHUSETTS

Whitman, Mass. Johnson City, N. Y. Columbus, Ohio Cincinnati, Ohio Chicago, Ill. Milwaukee, Wis. Kitchener, Ont. St. Louis, Mo. Westfield, N. J. Los Angeles, Cal.

battlefronts interfere with your good time.

6. Keep the telephone busy with your personal calls. This can be counted on to prevent urgent business from being executed.

7. Join the AWOL Club and encourage others to join. Should the Japs and Germans win, you could then wear the Iron Double Cross.

8. Stay out late every night. Raise lots of Cain. You can sleep on the job the next day.

In this way, containing a reference to every habit which helped to slow up production and efficiency, the sign was a quiet reminder which everybody could appreciate. The shoe plant received much better cooperation thereafter.

New Ventilated Insole

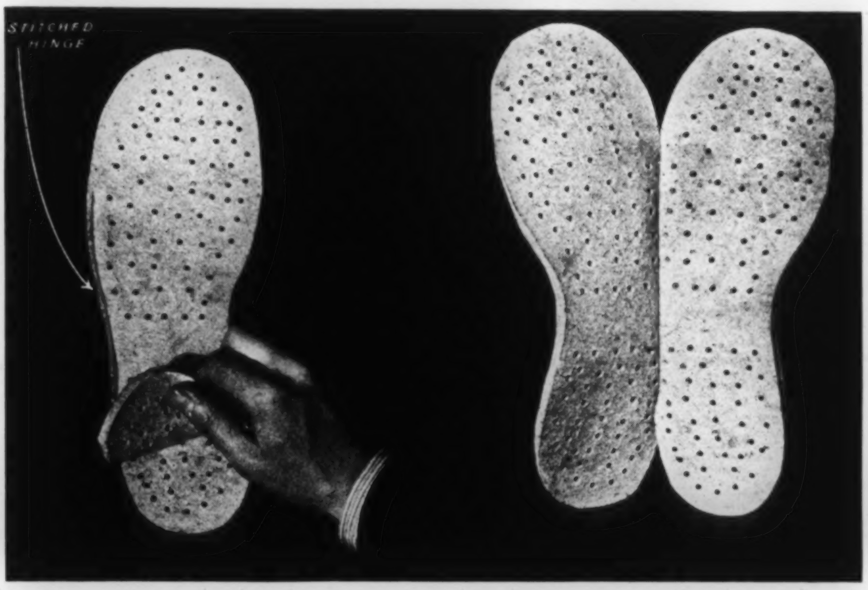
STRIVING to add comfort to the feet of soldiers guarding the northern outposts of the nation's far-flung battle line, a Connecticut felt manufacturer has designed a new wool felt insole for military and civilian shoes.

The felt manufacturer is Jule F. Marshall, vice president of the American Felt Co., Glenville, Conn. The sole has been given the name "ventile" (generic, not trade), a word coined by members of a recent expedition to express the ability of a bodily covering to ventilate by "breathing." This important property permits moisture from perspiration to be exhaled, whereas nonporous coverings retain moisture, which forms ice and becomes an important source of discomfort and danger. This is true even when extraordinary precautions are taken to prevent the conduction of heat away from the body.

The new insole differs from the usual type in that it consists of two layers of wool felt totaling up to one-half inch in thickness and these are hinged at one side by a stitched seam. This seam runs for about five inches along the outer edge of the instep and permits the upper and lower layers to "work" under the intermittent pressures of walking.

Both layers are also perforated, having approximately one hundred holes 1/8" in diameter spaced 3/8" to 1/2" apart. This novel construction has been tested for both ease and warmth, with highly promising results on both counts.

The type of wool employed in this felt is specially selected for its tendency to loft itself when released from pressure, instead of matting down and losing the springy support. It is antiseptic and fungus proof and will not stretch when washed, if properly handled.



Arctic expeditions and tests by Army and civilians result in foot-comfort in cold climates. New wool felt insole, designed by Jule F. Marshall, vice president of the American Felt Co. It "breathes," exhaling moisture from perspiration, tending to keep the foot dry and thus able to retain its own heat.

Lengthy and exhaustive tests revealed numerous difficulties encountered in Arctic regions which this ventile construction was designed to remedy. For example, the most successful foot gear combination for operating at extremely low temperatures in general, was found to be the mukluk in combinations with Hudson Bay duffels and two pairs of wool ski socks (or in some cases silk socks adjacent to the skin). Dry tan mukluks are considered ventile, whereas oil tan and rubber are not. The fact that perspiration freezes between socks and outer covering means that careful consideration must be given to it in relation to thermo insulation and comfort for the wearer. With this in mind Mr. Marshall found that the ventile sole was an improvement for the mukluk combination.

One expedition reported its members noted that their feet warmed as soon as they rested after working and they recommended that the physiological origin of this unusual finding should be examined for its possible influence on the amount of work that personnel should be permitted to perform. This too, was taken into consideration in subsequent ventile sole tests by the designer. As an illustration of the proper manner of wearing, experiments are carried out on boots worn alternately on each foot. Loosely laced footwear was found to be much warmer than tightly laced, and unquestioned warming of the foot occurred when one boot was unlaced and opened at the cuff and the other left fully laced. The possibility of escape of perspiration which would otherwise continue to freeze, may be the reason.

Mr. Marshall and others are continuing experiments with the ventile sole during the months ahead to ascertain how it fills the requirements of ski troopers and branches of the Army and other services where wading in water, slush, and mud becomes a necessity. The same applies to naval and numerous civilian operations, including outdoor workers in such fields as road building, shipbuilding, telephone and telegraph linemen, railroad maintenance, lumbering, mining, fisheries, transportation and truck fleets, municipal departments, policemen, firemen, etc.

. . . V ——

• *Maurice Bernstein*, shoe buyer for *Hutzler Bros. Co.*, Baltimore, Md., has resigned to join the armed forces. *George Hagedorn*, who has been connected with the department since 1923, has been named acting buyer.

Unsung geniuses who have developed genuine work shoes should receive more recognition. Basic design requirements are simple, but important.

SCORES of shoe designers and fashion authorities have earned considerable reputations and favorable incomes in recent years by coordinating footwear fashions to complete the ensemble of the well dressed male and female. But who ever heard of a designer winning fame or fortune through the creation of good work shoe designs? There should be more recognition and encouragement for the unsung geniuses who have developed industrial footwear that meets the needs and wants of working men and women.

The basic design requirements for men's and women's industrial footwear are simple enough, but meeting those requirements requires as much study, research, and creative ability as is involved in the creation of high style footwear for the smart salons catering to ultra exclusive customers.

First of all, a good work shoe must be comfortable. Otherwise the efficiency of the worker is lowered and his foot safety and health endangered. Comfort begins with the design of the shoe. The last should provide generous toe room, comfort across the ball of the foot and at the instep, and snug (not tight) fitting at the waist and heel.

The toe box should be rounded and wide enough to prevent curling of toes on top of each other—and high enough so that they will not be pressed when the shoe is worn. Ample room across the ball is important because the shoe can press like a vise here if it is not properly designed. Furthermore, after shoes have been worn for hours by a worker standing on a vibrating factory floor or in the hot recess behind a store counter, the feet swell at the ball and if the shoes are too tight they become torturous towards the end of the day, slowing down the worker and affecting both his body and nerves. If good designing at the instep is neglected the shoes will cut and chafe after hours of wear, and this also lowers efficiency. At the waist and heel the foot must fit snugly to increase comfort and to provide proper foot support.

There are other requirements for a truly comfortable shoe. The sole and heel tread must be right and the heel of a woman's shoe should be low to medium height with a broad enough top to insure good support and safe tread. Seams should not be placed at parts of the shoe where they will chafe the foot and they should never be bulky. Cutouts not only decrease the foot protection of the shoe but they are often uncomfortable for work wear, as many women know.

The safety factors in work shoe design are of two general classes: Special protective features, and considerations of general safety for the wearer.

Most common protective feature incorporated in work shoes is the steel or plastic safety box toe. It is impossible here to enter into a detailed discussion of safety toes, but it must be stressed that not all shoes with so-called safety toes are safe. In the first place the box toe material must be strong enough to withstand substantial shock—some steel and plastic toes are not. It must be as light as possible consistent with strength requirements. The toe must be designed so it can be removed easily from the shoe if necessary in case of accident, thus preventing further injury to the wearer's foot caused by removing a shoe with a crushed safety toe. These requirements have been carefully analyzed by the leading makers of safety shoes, safety engineers, and by employers. They have been considered in detail in the war standards for work footwear prepared or in preparation by the American Standards Assn. which are described in another article in this issue. They should be familiar to every designer who is preparing work shoe models.

General safety requirements in work shoes include the elimination of women's designs with open toes, open backs, open shanks, or cutouts. The fact that such shoes are worn by workers, even those engaged in heavy industry, is no argument in their favor. Most reputable shoe manufacturers frown on open shoes for work wear; safety engineers never approve them. The shanks in all work shoes should be substantial and provide proper support for the arch of the foot throughout the entire life of the shoe. Sole and heel tread is very important for safety.

Other special safety features include non-conductive (non-sparking) construction of shoes worn in powder plants and similar places, high boots designed to protect the feet of workers from burns and bruises, wooden or rope soles to prevent slipping in so-called wet occupations such as dairy and laundry work, etc.

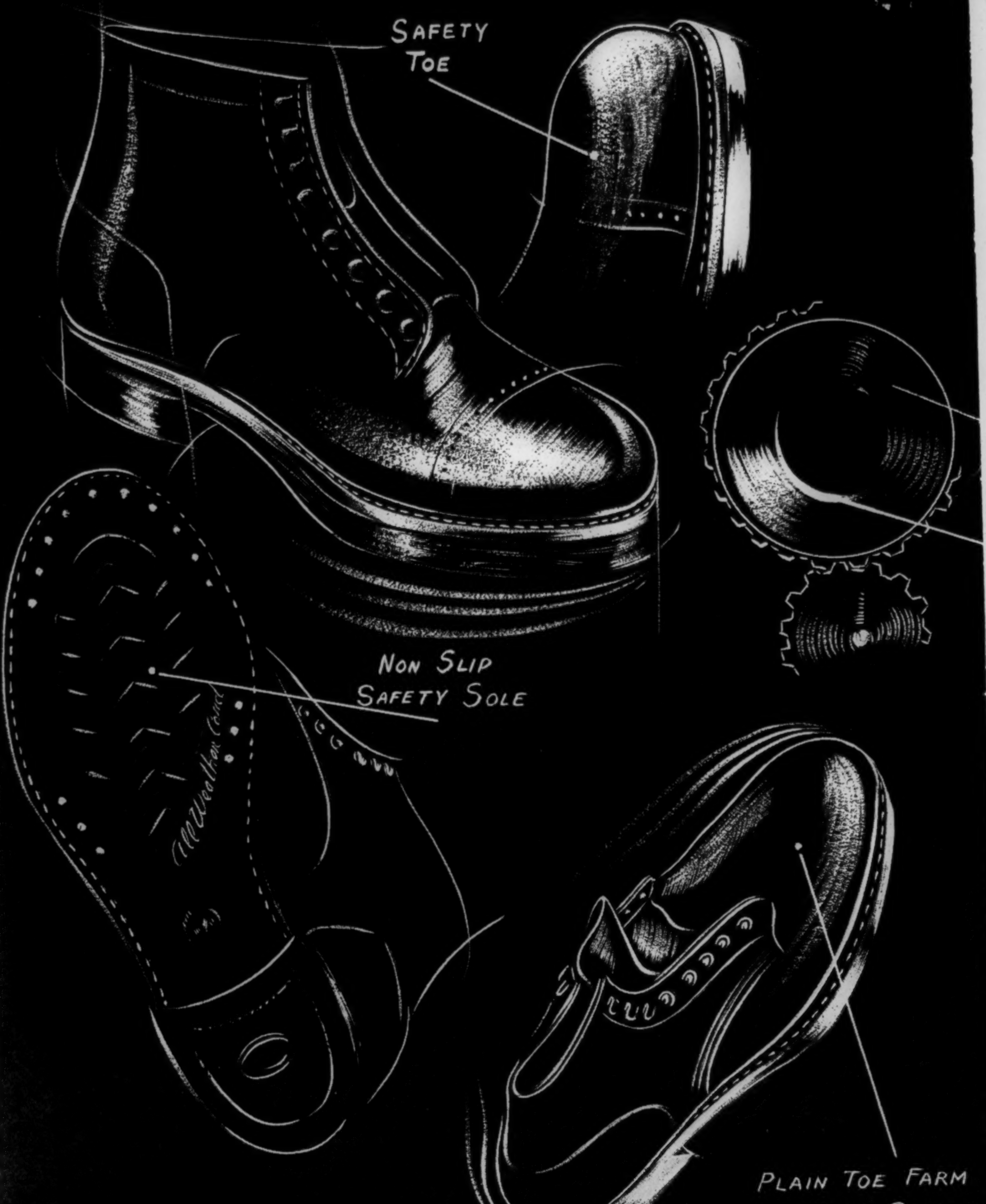
The work shoe designer cannot be unmindful of the need for utmost safety in the design of every shoe for work wear, not just for those shoes which are designed for protection against special occupational hazards and which are included in the special classification of safety shoes. "Safety shoes" are more properly "protective shoes"; every good work shoe must be a safe shoe.

Finally, the point of attractiveness is essential to good work shoe design. In the women's field, attractiveness may mean all the difference between a sale and a walkout. The woman worker does not expect her work shoes to be as glamourous as her high heeled party sandals, but she

(Continued on page 56)

Design FOR INDUSTRIAL FOOTWEAR

APRIL 17-1943


SAFETY TOE
NON SLIP SAFETY SOLE
All Weather Cord
PLAIN TOE FARM WORK SHOE

Sixty million men and women are enrolled in the army at home working behind the fighting front. Good work shoes will help their productivity and health, and guard against unnecessary accidents.

A CHICAGO podiatrist recently asserted that 20 per cent of the absenteeism in war production plants is directly traceable to the wearing of improper shoes on the job. This startling statement may be exaggerated, but there can be no doubt that it warrants considerable investigation. For there is very good reason to suspect that an appreciable percentage of absenteeism could be traced to improper shoes and could be eliminated by encouraging the wearing of proper shoes during working hours.

From Portland, Maine, to Portland, Oregon; from Lake Superior to the Gulf of Mexico, some 20 million men and women are producing the greatest mass of war materials that has ever been turned out by any nation in the history of the world. Side by side with these toilers are some 40 million more men and women who are maintaining the production of food and essential consumer goods for civilians. The war effort and the maintenance of the highest civilian living levels of any nation in the world today depend wholly upon the labors of these 60 million busy men and women. And every hour that is lost by these 60 million cuts just so much into the total production, a cut that can reach alarming proportions and, in fact, already has in some sections.

No item of wearing apparel has so much to do with the safety, comfort, efficiency, productivity, and general health of this important 60 million workers as the shoes they wear.

Just how great an effect the wearing of improper shoes on the job has no one knows exactly. There has been relatively little study of the subject and statistics are lacking. Furthermore, it would be very difficult to draw a line exactly and determine all of the harmful results of improper work shoes. Many of those results would not show first in the feet of the worker, but would be blamed on poor health, accidents, fatigue, and lowered morale. Yet these things so often arise from foot ills that the toll taken in the ranks of the workers every day by improper work shoes must be tremendous.

The needs of wartime industry have focused more attention on work shoes than they have ever had before. Government officials, consumer leaders, safety engineers, employers, and shoemen are awake to the truism: "You can't win a war without work shoes". An unshod war worker would be as helpless and ineffective as an unshod soldier. An improperly shod war worker is as handicapped as an improperly shod soldier. So shoes for the working front are being recognized more and more as having an importance which runs a close second to the shoes of the fighting men.

The War Production Board, Office of Price Administration, Department of Labor, Department of Agriculture, and U. S. Maritime Commission have studied the work shoe problem in recent months and have gathered much information which is of vital interest. Employers have in many cases recommended certain types of work footwear for their employes and in some cases the wearing of recommended shoes is a requisite to continued employment. Workers themselves are demanding more comfortable, more safe, and more practical work shoes.

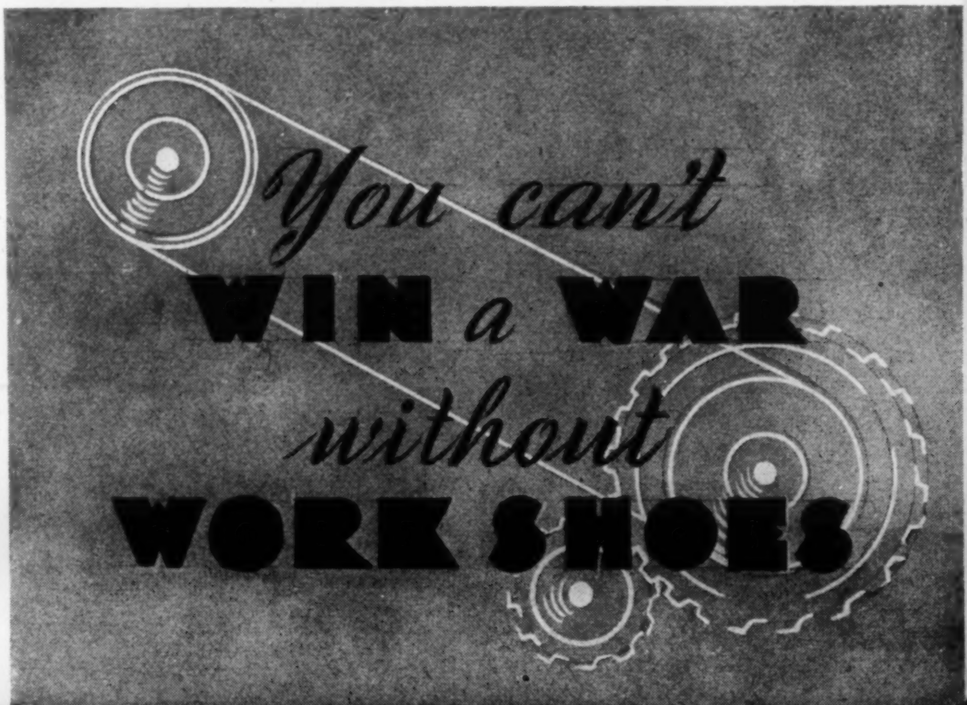
On the work front, the WPB and the OPA about a year ago asked the American Standards Assn. to prepare definite standards of construction and specifications for a number of types of protective footwear for men and women. After patient research and extensive testing, the ASA has drafted some of these standards and these have been approved. Others have been drafted but not yet approved, and still others are projected. A list of the ASA War Standards for protective footwear is published elsewhere in this issue.

On the woman's front, HIDE AND LEATHER AND SHOES last year questioned the lack of women's work shoes, properly designed and constructed and clearly identified as work shoes. It conducted a study over a long period of time, covering many phases of the situation, including consumer attitudes and industry problems. The findings of this study have been reported in a series of 11 articles which was concluded in the Apr. 3 issue. They have been used as a basis for additional studies by Government agencies and consumer groups, and a number of leading employers of large numbers of women have used the information gained by the magazine and have reprinted portions of the articles in their house organs and used the illustrations as plant posters.

When the magazine's study was started there were few women's shoe manufacturers who were cultivating the vast and fertile market for women's work shoes. Months later, a survey of the industry showed that scores of manufacturers are making shoes recommended for women workers and a list of these manufacturers, classified by types of shoes, was published in the Apr. 3 issue of HIDE AND LEATHER AND SHOES.

The surface has just been scratched in this new recognition of work shoes

(Continued on page 57)



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FOR SERVICE MEN AND WOMEN

Ross-Ette

SMOOTH AND BOARDED LEATHERS
ALSO LEATHER FOR WORK SHOES

For the Home Front and the War Front we are making high grade leathers for the following vital services:

Army Nurses' Shoes . . . . Aviators' Flying Jackets
Tank Helmets . . . . Aviators' Helmets
Cap Visors . . . . Ski Troop Mittens

and

Glove leathers for all branches of the service

Chicago's oldest tanning firm is proud of its all-out contribution for aiding the successful prosecution of the war both on the battle front and the home front.

A. H. ROSS & SONS CO. **CHICAGO, ILLINOIS**

MERCHANT-LOVEYS ....BOSTON
AL W. MEIER CO..............ST. LOUIS
SCHOENBERG LEATHER CO..PHILADELPHIA
A. W. PATTON..............MILWAUKEE
BANKART & SAMUELSON.......NEW YORK
A. J. & J. R. COOK.........LOS ANGELES

Shoe manufacturers find demand for work shoes has risen sharply in past two years which has resulted in changes of schedules, H&L&S survey shows.

THE RISE in demand for suitable work shoes for both men and women which has taken place in the past two years is the most spectacular shift in buying emphasis the industry has experienced in all its history. Customers who two or three years ago were thoroughly "sold" on light weight footwear for work as well as general wear, or who didn't bother much about what kind of shoes they wore to work, are now demanding good work shoes and will not be influenced against them.

The cause of this sharp upward spurt in the demand for the comfortable, durable, and safe shoes that are especially suited for work wear in industry is easily found. It started with the upswing in war production, it continued with the sharply increased activity of civilians engaged in wartime activities such as civilian defense, Red Cross work, and many wartime voluntary services on the home front, it continued further when shortages of rubber and gasoline restricted the use of automobiles and increased the nation's necessary "shoe mileage" heavily.

All of these things brought a greater demand for work shoe types of footwear. This resulted in wholesale revisions of production policies in many factories, large increases in output of work type shoes by manufacturers who had formerly included these types in their lines, and the addition of these types to lines which did not previously include them.

Take the San Francisco firm of Buckingham & Hecht, for example. This firm specializes in making high quality, heavy type, men's work shoes. "The present demand for the men's industrial footwear we are making," said Eli H. Wiel, president, "shows so great an increase compared with two years ago that it is now far beyond our capacity to satisfy the demand."

"Out of 250 types which we make, the bulk of our output at the present time is confined to 15," Mr. Wiel told HIDE AND LEATHER AND SHOES. "These are work type, built on work shoe lasts from six to 10 inches in height, of heavy Goodyear welt construction. Oil tan and retan chrome and vegetable leathers constitute 90 per cent of the materials we are using," he reported.

The industrial footwear manufactured by Buckingham & Hecht is sold not only through regular retail outlets, but also through commissaries operated by industrial firms. In addition, large quantities are sold to Governmental departments. For example, a leather lined, lace to toe, chocolate elk, Goodyear welt, cord sole and heel work shoe is used by the Navy for its Construction Battalions of specialists known as "CB's" or "Seabees," and the shoe is now called the Navy "CB" shoe.

"We are working Saturdays and overtime," Mr. Wiel reported. "But the enormous influx of workers to war industries on the Pacific Coast has created a demand far beyond our resources to supply, due to shortages of material and labor."

However, Mr. Wiel sees nothing unique in his own firm's recent experiences. He smiled and said, "If you got together 150 of the leaders in the industry and had each one toss into a hat a statement of his present problems, any slip you might draw out at random would tell the same story—labor and materials are short."

Two years ago, 100 per cent of the firm's output went to serve ordinary peacetime civilian needs, Mr. Wiel noted. "Now," he added, "only 33 per cent goes to civilian needs, and twice as much goes for war purposes to Governmental departments, and for use in war industries."

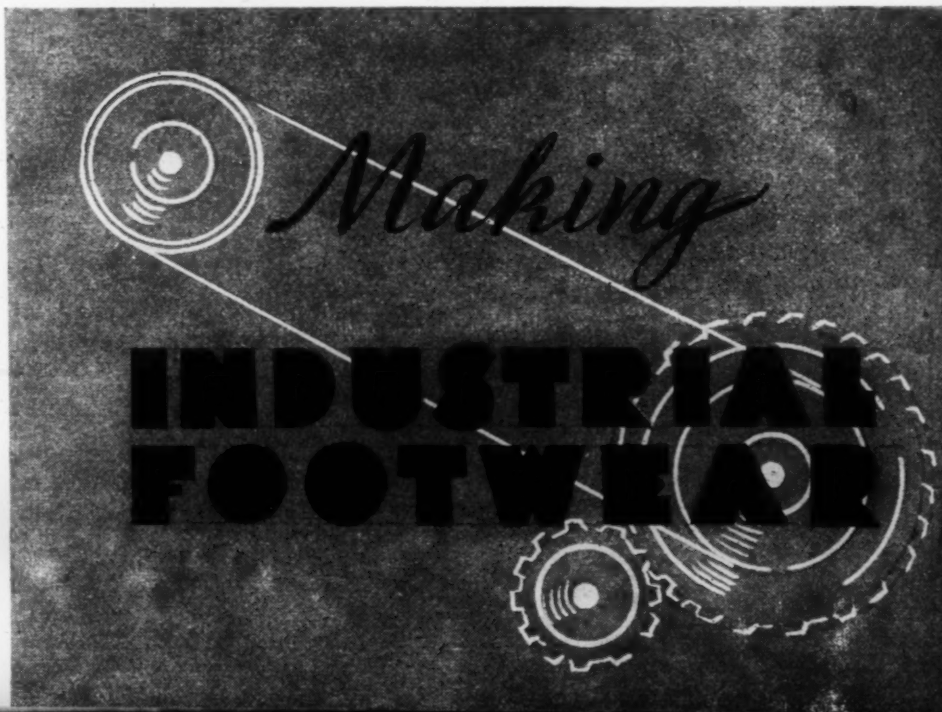
The Endicott-Johnson Corp., one of the largest manufacturers of work shoes in the country, reports a large increase in work shoe types and that approximately five per cent of the company's production is safety toe shoes for industrial workers.

The principal leathers used in the manufacture of Endicott-Johnson shoes are cowhide leather made in elk, retan, gun metal, and colored side tanned in the corporation's own tanneries. Approximately one-half of the shoes are made with leather soles, and the other half with rubber composition soles.

Endicott-Johnson's distribution of shoes is through catalog houses, chain stores, independent retail stores (sold through in-stock departments in St. Louis, Mo., Endicott, N. Y., and Knoxville, Ky.), wholesalers, and approximately 15 per cent through its own retail stores.

Individual factories of the Triple Cities, both those concerned with Endicott-Johnson and independent plants, had their stories to tell concerning the shoe industry today.

Men's and boys' shoes are being made exclusively in Endicott-Johnson's Men's Scout Factory in Johnson City, N. Y. "Work-Well" shoes for defense workers are creating the biggest demand, according to John Madden, superintendent. This factory is listed next to the Army factory in Endicott for the making of E-J "essential" shoes. Safety shoes are being made in this factory. These are made with steel reinforced toes. About 15 per cent of this factory's production is safety shoes, made exclusively for men. Mr. Madden said the life of an ordinary work shoe turned out in this factory was about four months. Leathers being used in these shoes are elk, retan, and oiled



leather. Elk is used most. No split leathers are used in this factory.

Percentage of shoe production in the E-J Men's Scout Factory has practically doubled since two years ago, due mainly to defense needs. No more new lasts can be obtained in this factory, and last year's are being used. As styles of work shoes vary little, there is not much concern over lack of lasts.

Only women's shoes are made in the E-J Women's Medium McKay Factory, Henry Rosenzweig, superintendent, said. Both McKays and stitchdowns are made here. Leathers used are elk, side, and kid, mostly the latter. No safety shoes are made in this factory. McKay shoes are mostly arch supports and old ladies' comforts, while stitchdowns are those worn mainly by growing girls, including school shoes and outdoor shoes. Shoes made in this factory are termed "sensible shoes" by Mr. Rosenzweig, and can be used by women in industrial work. Orders for these shoes are heavy, and more shoes are ordered than the factory is allowed to produce.

Twenty per cent less shoes are being made here than two years ago. Leather is becoming scarce, which accounts mainly for the production decrease.

The Binghamton Workshoe Factory, an E-J plant, is manufacturing a light weight work shoe exclusively for men. Split leather only is used, and no safety shoes are made.

The Binghamton, N. Y., plant of Truitt Bros., Inc., reports it is making no safety shoes but is making work styles for men and boys and that the production of work oxfords has increased 33⅓ per cent over two years ago.

Indicative of the increased attention being given to the production of women's work shoes is the experience of two Massachusetts factories queried recently by HIDE AND LEATHER AND SHOES.

L. B. Evans' Son Co., Wakefield, Mass., one of the oldest shoe and slipper manufacturers in the country, reports that a women's moccasin type shoe designed particularly for work wear has been "making a hit since the first day it was shown."

Two years ago any type of woman's industrial shoe was a slow moving number. Today, because of this new type shoe, the Evans company is oversold. The shoe is hand turned, light in weight, has a low heel, and retails for five dollars and the usual ration coupon. It was primarily designed to take the place of the two-toned saddle shoe that was put out of existence by priorities. Twenty-five pairs were sold the first day the shoe made its appearance at Marshall Fields in Chicago. Since that day girl workers in western airplane factories have been buying them as fast as they can be supplied.

One of the officials of the Evans company said, "A definite change has taken place in footwear for women war workers. The moccasin type shoe has come into favor during the past two years. In plants where heavy toed shoes are not necessary, this type is in great demand.

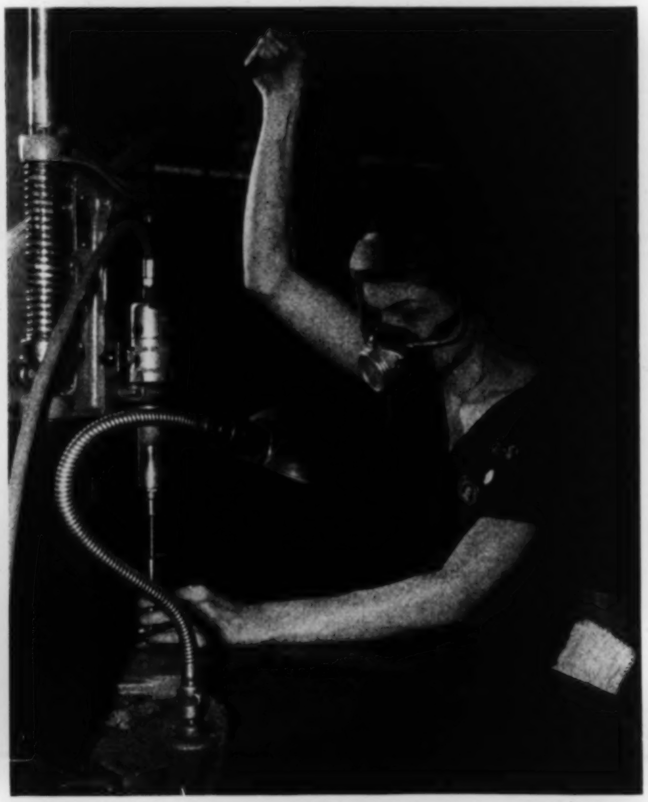
"Frankly, I don't think it will be possible to put women into heavy type industrial shoes. Perhaps the older women and those working at drop forges and other plants where heavy machinery is used. I doubt, however, that they will be worn at any of the other factories.

"The recent flare-up over sweaters proves that women are still feminine and style conscious. They want red polish for their finger nails and shoes that will add to their general appearance. It is quite apparent that style

GOOD WORK SHOES HELP

Gas welding a plate for a 50-ft. steel ramp boat in a southern yard, building boats used in landing men, tanks, and other equipment on hostile shores. Torpedo boats, smaller wooden ramp boats, and other Navy craft are also made at this yard. Good work shoes help do all important war jobs better.

Official OWI Photo by Hollen.



"MILLION DOLLAR BABY"

A "million dollar baby" in her value to Uncle Sam, 21 year old Eunice Hancock, erstwhile five and ten cent store employe, operates compressed air grinder in midwest aircraft motor plant. Eunice quickly mastered the techniques of her war job and today is turning out motor parts with speed and skill.

Official OWI Photo by Ann Rosener.

A Dual Personality

Ohio calf leathers have a dual personality but only a single standard.

They are fine quality calf leathers, embodying the skill and experience of more than 40 years of calf leather tanning. Their economical cutting, mellow softness, smart finishes, and long-lasting beauty have made them the first choice of America's most discriminating leather buyers, fashion dictators, and sales managers.

Today these leathers are serving on the seven seas and wherever the footwear of Uncle Sam's sailors, Waves and Waacs is on duty. They are favorites at the Post Exchanges. They are doing their duty in footwear on the home front in every war effort.

And the fashion personality of Ohio calf leathers is as bright as ever. There are fewer colors and finishes in the Ohio line, because we're all conserving materials and manpower to speed Victory. But Ohio calf leathers sparkle with the fashion lure of today—smart, bright, and always "correct" for every occasion.

And the single standard of Ohio calf leathers remains unchanged—The Ohio Quality Standard—"the finest calf leather which long experience, progressive methods, and highly skilled craftsmanship can produce."

for men
***JACK JETTA**
TOLCO

for women
***JILL JETTA**

* THE WORLD'S FINEST BLACK CALF

Leading the leather parade to war on Every Front...

in shoes as well as clothes is a must with the girl workers. Being women, I suppose they'll eventually get what they want."

Alfred Levine, general manager of the Lebon Shoe Co., Malden, Mass., also declared that girl workers in war factories are demanding neat appearing footwear.

"The great influx of women workers," he said, "created a heavy demand for the leisure and play types to be used as industrial shoes. We have been manufacturing an inexpensive and a medium priced moccasin type shoe. The demand was heavy and orders were coming through fast until rationing came along and put a crimp in the business.

"We are meeting this new problem with a synthetic shoe. Our designers and research workers have been busy for months and it will be on the market soon. It will be made in several smart styles; no coupon will be needed. Now we'll see what's going to happen."

Cincinnati shoe manufacturers, especially those in the women's field, report a "tremendous upturn in demand" for industrial type shoes.

The U. S. Shoe Corp. reports a "much bigger demand for industrial shoes for women." The firm is featuring a low heeled model with a safety box toe designed to withstand 500 pounds pressure. It adds that these shoes are in special demand in the West Coast aviation plant sector of the industrial front.

The Schawe-Gerwin Co. is making a safety toe model for women with a 12/8 and 14/8 heel. Altman Bros. Shoe Mfg. Co. is making a walking type shoe used in many war plants but, like many other manufacturers who were questioned by HIDE AND LEATHER AND SHOES, this firm says it has "no shoes to offer—production sold out." The Krippendorf-Dittman Co. is making a street shoe with a hard toe box which is being sold to war workers through retailers and department stores.

A very heavy demand for work shoes is reported by W. H. Spear of Roberts-Hart, Inc., Keene, N. H. Mr. Spear said:

"Our regular type of footwear is men's and boys' heavy work shoes. For the past year and a half we have been working on government contracts, making Russian army shoes. About 80 per cent of our production has been taken up with the Russian shoes. The balance of our production has been men's work shoes, for which there is a very heavy demand. The demand far exceeds the supply and there is a ready market for whatever civilian shoes we are able to make. However, we feel that Government work is more important.

"Most of our civilian shoes at the present time are made from Army retan leather, those parts which are not suitable for the Russian army shoes. In ordinary times most of our work shoes are made from elk. It is almost impossible to obtain elk under the present conditions. The civilian work shoes are made with both rubber and leather soles. The supply of leather for civilian shoes is very limited due to the extraordinary demand for soles for military purposes."

Both the International and Brown shoe companies in St. Louis are making large quantities of various types of work shoes and shoes suitable for work wear by both men and women. Production conditions at these factories have not changed much in the past two years, as both firms were making well developed lines of safety and work shoes before the war started. However, the demand for these shoes has increased tremendously in the past two years, of course, and this has been reflected in correspond-

"SUPERIOR LEATHERS"

★

"Katz Chrome" Elk and Waterproof Upper Leather

An ideal leather for shoes in both full grain and corrected grain.

★

"Chrome Retan Upper Leather"

A high quality shoe leather, highly water resisting and easily worked in the shoe factory.

★

"Chrome Retan Sole Leather"

Outstanding in its waterproofing and long wearing qualities. Comes in bends, shoulders and bellies.

★

Horse Hide, Glove and Garment Leather

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AGENTS

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Boston, Slattery Bros. .... 210 South St.
New York, Louis Samson .... 100 Gold St.

ing enlargements of output of these shoes.

Also, there has been some additional development work in the women's work shoe field and both firms are now making a number of types of shoes especially suitable for women's work wear.

The International Shoe Co. maintains a complete stock of all types of work shoes, including light weight welts, heavy welts, cemented, stitched, and nailed shoes. Upper leathers used range from fine smooth finished calf to heavy oiled leathers. Steel arches and shanks, cookie insoles, and metatarsal pads are common features in the general work shoe lines manufactured by International.

The firm is meeting a heavy demand for steel toe safety shoes and for non-sparking shoes for powder plant work.

The Brown Shoe Co. also reports a heavy demand for safety toe and non-sparking shoes. Other work shoes for men and women contain such features as specially constructed insoles, arch supports, etc. Many of the work shoes are sold through mail order houses or through plants and factories.

The Red Wing (Minn.) Shoe Co., which makes a line of specialized work shoes for truck drivers, construction men, lumberjacks, bridge builders, etc., reports a large increase in demand for these shoes. This footwear contains such features as spring steel shanks, sweatproof insoles, steel safety box toes, etc. Some of the shoes are made with a seamless vamp, anchored armor plate steel toe, buffer pad, and spring steel arch supports.

The Wolverine Shoe & Tanning Corp., Rockford, Mich., has experienced the same sharp increase in demand for its product that has been felt by other established makers of work shoes. This firm makes all of its work shoes with shell horsehide uppers and civilian work shoe current production is divided between safety industrial footwear and shoes for agricultural workers.

The Saco-Moc Shoe Corp., Portland, Me., is another manufacturer of work shoes which is finding orders easier to get than to fill. Present production includes a regular line of heavy work shoes for general occupational wear, an oxford type moccasin designed for work wear, safety shoes with steel toes, and non-sparking powder plant shoes.

A general line of work shoes is manufactured by the General Shoe Corp., Nashville, Tenn., which reports present production of this footwear is at high levels. The shoes contain a 25 per cent cushion insole and are made with flexible construction.

The Prime Shoe Co., Chelsea, Mass., pioneer in the development of low priced work shoes for women, reports that present demand is taxing its facilities. For several years the firm has been making field shoes for women agricultural workers. These are Goodyear and nailed construction with rubber soles and black or brown uppers. Over a year ago it developed a safety toe work shoe for women and it also makes special moccasin types for shop work. Retail prices range from $2.50 to $3.50 a pair.

A number of the work shoe manufacturers who were interviewed by HIDE AND LEATHER AND SHOES are making some women's work shoes and report that demand for these is increasing steadily. Scores of manufacturers in the women's field were interviewed recently by the magazine in connection with its study of women's work shoes, and a list of the makers of women's work shoes, classified by types of shoes made, was published in the Apr. 3 issue.

The manufacturers who comment-

Front Lines For Defense

Leathers Made to
Government Specifications

FULL GRAIN and CORRECTED

VEGETABLE and CHROME TANNED SIDES

also

SPECIAL PURPOSE SPLITS

J. LICHTMAN & SONS

NEWARK, NEW JERSEY

ed on their work shoe experiences are typical of the field, and their experiences are being duplicated in many men's and women's shoe factories today. They indicate that greatly increased production schedules prove the new era for better work shoes, and that the manufacture of these is not surrounded by any special problems, although the general situation regarding available supplies of vital shoe materials and the weakening manpower of the shoe industry may hit work shoes harder than dress shoes because of the fact that work shoes require excellent materials and are essential footwear which cannot be abandoned when wartime difficulties arise, for the same war which created the difficulties has also created a great need for the shoes. The makers of work shoes throughout the country are bending every effort to keep the working front at home well shod.

War Standards For Work Footwear

At the request of the War Production Board and the Office of Price Administration, the American Standards Assn. has drafted a number of standards for protective footwear for men and women. Those which have already been approved may be obtained at a nominal cost from the American Standards Assn., 29 W. 39th St., New York City. They cover complete specifications for materials and construction in each case.

Standards which have been approved, drafted but not yet approved, or are under consideration, are as follows:

Approved Standards

Specifications for Men's Safety Toe Shoes (Z41.1—1943).

Specifications for Men's Conductive Shoes (Z41.3—1943).

Specifications for Men's Explosives Operations (Non-Sparking) Shoes (Z41.4—1943).

Specifications for Men's Electrical Hazards Shoe (Z41.5—1943).

Specifications for Men's Foundry (Molders') Shoes (Z41.6—1943).

Specifications for Women's Safety Toe (Oxford) Shoes (Z41.2—1943).

Standards in Draft Form

Specifications for Women's Safety Toe (High) Shoes (Z41.7).

Specifications for Women's Explosives Operations (Non-Sparking) Shoes (Z41.8).

Specifications for Women's Conductive Shoes (Z41.9).

Standards Under Consideration

Specifications for wooden sole shoes for use by workers in places where oil or acids may form puddles, or workers with concrete.

The specifications numbered Z41.2—1943; Z41.3—1943; Z41.5—1943; and Z41.6—1943 are second editions. Revisions were necessary almost immediately after the first editions of these standards were approved in the middle of February, because additional information became available from research carried on by the Ordnance Department and technical agencies of the Government.

The standards listed in the second group above will not be complete for four or five weeks.

The proposed specifications in the third group have been discussed, but no attempt to prepare drafts have as yet been made.

The ASA standards are not required to be followed by the shoe industry, as a Government regulation, but were developed for the guidance and assistance of the shoe industry and to aid in the development of work shoes particularly suited for the needs of war workers and manufactured under rigid standards.

For Military Use
For Civilian Use

LORDCO
SIDE LEATHERS

PARIS
Leather Company

70 SOUTH STREET
BOSTON, MASS.

Work shoe merchandising requires development of new merchandising policies to meet the needs of the markets for three general types of shoes.

THE suddenly increased demand for work shoes in the past two years has necessitated in many instances a new merchandising program and the development of entirely new and unfamiliar merchandising policies. The routine of the past has not been sufficient for the need of the present, and many readjustments have been made and are still being made.

Men's wartime work shoes can be roughly divided into three types: military shoes; safety, protective, and specially designed and constructed footwear for special occupational conditions; and shoes for common work wear where no special occupational conditions or hazards exist.

Women's work shoes, still in their infancy, may be likewise divided into the three general groups, but they fall into many additional classifications that are not found in men's footwear. The reason for this is that men's shoes are basically very much alike, and in the broad field of footwear for general work wear a durable oxford of a very common type meets most of the wearer's requirements. In women's shoes, however, there are many factors to consider, and heel heights, arch construction, lasts, etc., will vary greatly according to the work being done and the preferences of the wearer.

Men's Service Shoes

Prior to the inauguration of the defense program, which became accelerated into a full fledged war program, few of the thousand or more shoe manufacturers in the United States knew or cared much about the merchandising of shoes for the Army and Navy. Since the days of World War I, manufacture of military footwear had been confined to a relatively few shops which were specialists in both the making of such shoes and in the procedure required for securing and fulfilling Government contracts. In addition to these, there were many shoe manufacturers, of course, who had made military footwear during World War I and had turned to other lines after the war. Through the years some of these went out of business.

Of course the present war has changed all this peacetime set-up. Many shoe manufacturers wanted to make military shoes and many others started making them as their obvious contribution to the war effort. And practically all of them had much to learn about Government procurement policies, Government specifications, Government inspection and shipping practices, etc. They learned. Fast. And the result was that from the day the defense program started there has never been any question about an ample supply of footwear for our fighting forces, well made and delivered on time.

At the start of the program the Quartermaster Corps pursued its peacetime policy of awarding contracts on a basis of competitive bidding. Later on it adopted a wartime policy of negotiating contracts on a basis of manufacturers' offers and private negotiation. In each case, shoe manufacturers found that selling shoes to the Government was much different from selling to private buyers, and was governed largely by inflexible policies and procedures.

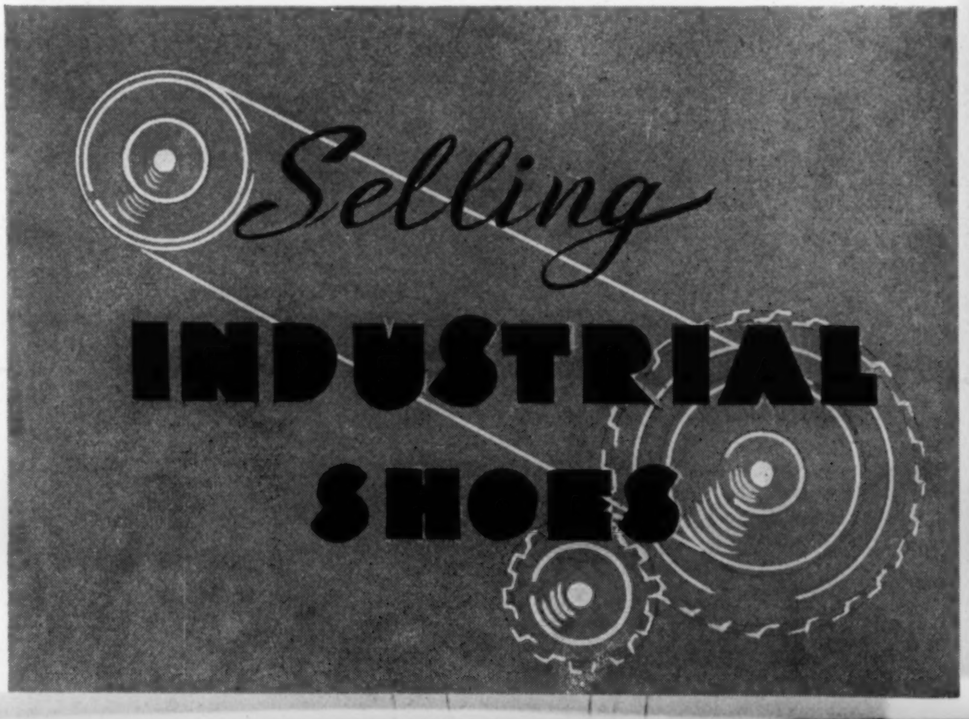
In many factories the handling of Government contracts was made the responsibility of one individual, whose job was to learn about Government requirements and specifications, study procurement methods, make all contacts and maintain all contract and delivery relationships with Government procurement officers, and study the developments of new types of military footwear and the factory's ability to produce these types. It was a big responsibility, and the men who have done this work have found themselves in the role of salesmen, production men, development workers, and conciliators.

Special Work Shoes

The job of merchandising special types of work shoes for protection against safety hazards and unusual occupational conditions requires a highly specialized form of merchandising, as specialized as the shoes themselves. In this field the merchandising job of the shoeman is shared with the employer of the prospective customer, sometimes directly, sometimes indirectly. The employer usually starts the job of merchandising by stipulating the kind of footwear acceptable for wear on such jobs, and this is often done over the protests of the workers themselves who in the long run have the most to gain from the foot protection.

The shoeman then enters the picture and his first job is to provide the type of shoe that is required for each specific case and then to arrange to make it more easily available to the workers. Sometimes this is done through the commissary, plant store, or even the personnel office of the industrial plant. In such cases, it is common for the employer to stock stafety shoes in a full range of sizes and to provide them to workers at cost or at a mark-up which is subtantially below that which is charged by the regular shoe retailer.

The plant distribution program has several advantages for shoe manufacturer, employer, and worker. The manufacturer sells the shoes in large quantities and has no subsequent problem of selling to the individual customer; the employer controls distribution and has a positive check on the use of safety shoes by his work-



ers; the employes obtain the footwear at a lower cost than if they bought them in a shoe store.

Against these advantages are substantial disadvantages. The manufacturer has all his eggs in one basket —the purchasing department of the industrial organization to whom the shoes are sold. He may sell more shoes at a time; he also may lose the entire market if the purchasing agent takes his business to some other source. The employer has the expense and trouble of maintaining a complete stock of shoes on hand and of distributing them to the workers. The workers seldom receive the fitting service and personal attention from the plant store they would expect from a regular shoe retailer, a disadvantage that is highly important because of the fact that improperly fitted safety shoes are often worse for the workers' feet and general health and safety than the wearing of properly fitted shoes with no safety features.

In this field the shoe manufacturer must choose whether he wishes to sell his product through the employer or through regular retailers. In either case, he must study the local situation, the occupations performed in the plant, the available retail outlets and their qualifications to properly fit and merchandise safety shoes, and the arrangements which the employer would be willing to make to assure careful handling, as well as lowered cost, of direct distribution.

If the manufacturer decides to work through regular retail stores, then he must develop a complete educational program for both the retailer and the consumer. The retailer must be taught how to fit and sell the shoes; the consumer must be taught the importance of wearing them. If the manufacturer is going to distribute through plant stores then he must educate the men handling the shoes how to fit them properly; the employer eliminates the need for consumer education by specifying the wearing of the shoes as a requisite to continued employment. In either case, the shoe manufacturer has the whole responsibility of providing the proper footwear and insuring that it will be properly fitted; no little responsibility, and one which is surrounded by many problems. But the manufacture and sale of safety shoes is profitable enough to demand the

(*Continued on page 55*)

SPLITS
for every purpose
WORKSHOE LINING SUEDE
GUSSET GLOVE GARMENT
SIDE LEATHERS
for military and
civilian uses

BUY
MORE
WAR
BONDS

KORN
LEATHER CO.
TANNERIES & OFFICES
PEABODY MASS.

Selling . . .

(Continued from page 51)

care involved in their production and distribution.

General Work Shoes

Until recent months the shoe industry merchandised shoes for work wear only for men; women wore whatever leftovers they had on hand as a general rule. The war has changed this set-up to a considerable extent, and more attention is being paid to footwear designed and constructed especially for work wear by the millions of working women. But when general work shoes are being sold to either men or women the merchandising problems are much the same. The shoes, unlike safety shoes, are seldom sold through plant stores and most retailers do not give them the consideration they deserve as an individual and important type of footwear.

The manufacturers' biggest problem in merchandising general work shoes is to overcome the tradition that any heavy boot or oxford is a work shoe and that work shoes are wanted only by customers who are engaged in occupations for which such shoes are suitable. This tradition overlooks the fact that most store, office, and factory workers today do not want or need heavy, clumsy footwear and won't buy it for work, even though the only alternative is uncomfortable and unsafe footwear for general working conditions.

The merchandising job here is a widespread campaign to educate retailers to study the occupations of their customers and the working conditions and footwear requirements of those occupations, and then to stock the proper footwear to meet those requirements, to educate their customers to the advantages of suitable footwear for wear on the job, and to carefully fit every pair of shoes sold for work footwear so that the customer will be comfortable from the minute he steps out of the store until the day when he will return for another pair "like I had before". That is good, profitable business that has been too often neglected while manufacturers and retailers bent all of their efforts to merchandising dress footwear. Another method of merchandising work shoes is by direct selling through agents to the workers themselves. This method is practiced by relatively few firms, but there are several that have achieved outstanding success in the direct sell-

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Rugged ~ Heavy
SUEDE
LEATHER

FOR WOMEN'S WORK OR
SPORT SHOES

SLATTERY BROS. TANNING COMPANY
210 SOUTH STREET
BOSTON, MASS.

CLICKING MACHINES
FABRIC DIE CUTTERS, Etc.

RAPID SHOE MACHINE MFG. CO.

682 SIXTH AVE.
NEW YORK

Complete line of machines for shoe and leather industries

ing field. In this field it has been found to be most profitable to confine the line to comparatively few styles and to stress the simpler styles in both men's and women's shoes. The sales emphasis is usually laid on comfort, durability, attractiveness, and prompt individual service.

Direct selling supplements retail distribution in areas where customers are widely scattered, but it also is profitable in congested areas where it sometimes seems as though there is a shoe store in existence for every half dozen available prospective customers.

As direct selling is done through agents who seldom have any knowledge of shoes or shoe selling when they start to work, it is imperative that they be carefully trained before they are permitted to solicit orders. This is something that often is not done, and selling shoes through green agents sometimes results in decidedly unfavorable reactions. More careful training of agents, and constant supervision of their work would do much to improve this branch of shoe merchandising and, as a high percentage of direct sales are made in factories and shops, it would improve merchandising of work shoes to an appreciable degree.

Perhaps the most important point to be watched in the work shoe merchandising program—whether it be Army shoes, safety shoes, or general work shoes—is that the program must always be based upon the footwear requirements of the job in which the worker is engaged. Manufacturers and retailers in recent years have spent much time, money, and attention on fashion research and promotion in the high-style, novelty, dress and sports fields. Now they have given much more thought to the work shoe field than ever before.

Designs . . .

(Continued from page 23)

doesn't expect them to resemble too closely the design of a shoe box either.

Most men would like more attractive work shoes, too, and there is no good reason why they shouldn't have them. Millions of men who want comfortable, substantial shoes for work wear would also like to have them look well when they leave the plant. There is no reason why a shoe incorporating all of the necessary design requirements for work wear for men cannot be good looking too. This has been proved by the makers of steel toe safety shoes. Many of the boots and oxfords worn for toe protection are as smart looking as street shoes, and cannot be distinguished from ordinary shoes when worn on the street. There is no acceptable apology, therefore, for making other types of work shoes clumsy and coarse unless they are worn at occupations where special heavy footwear construction is required.

These are only the basic factors of good work shoe design. They can be amplified in hundreds of ways by shoe designers to produce individuality and greater attractiveness. But unless each work shoe is designed with these basic requirements in view then the designer has failed in his work.

War Shoes . . .

(Continued from page 46)

Navy Department

The Bureau of Supplies and Accounts, Washington, D. C., is the central buying agency for the entire service. Only limited quantities for emergency needs or of perishable goods, etc., are purchased by field offices.

Manufacturers who wish to be

MEN AND WOMEN, CHILDREN, TOO, WILL LIKE IT IF THEY GET FROM YOU

NEWFLEX PIGSKIN

IF THE BUYER YOU WOULD PLEASE, TREAT THE FEET TO WALKING EASE

INNERSOLES•COUNTERS•WELTING

TOP GRADE INSOLES PAVE THE SHOES OF MEN WHO FIND IT PAYS TO USE

NEWFLEX PIGSKIN

TAKE THE MAN WHO DOES THE LASTING; JUST FOR THESE HE KEEPS ON ASKING

INNERSOLES•COUNTERS•WELTING

WHEN THE SHOES START LOSING GROUND, NEWFLEX STILL IS GOOD AND SOUND

NEWFLEX PIGSKIN

WHEN THE LINE IS UP FOR STYLING, REMEMBER THEY WILL KEEP FEET SMILING

INNERSOLES•COUNTERS•WELTING

Edgar S. Kiefer Tanning Company

GRAND RAPIDS, MICHIGAN

Sales: Chicago, 223 W. Lake St.; Boston, 42 Lincoln St.

placed on the Navy bidders' lists must first be qualified and classified by local offices of the War Production Board. The Bureau of Supplies and Accounts will furnish procurement information only to manufacturers so qualified and classified.

Maritime Commission

Buying is divided between two offices:

The Procurement Section of the Construction Division, Maritime Commission, Washington, D. C., buys all material and equipment that is built into and becomes parts of ships under construction.

The Division of Purchases and Supplies purchases all movable equipment for the outfitting and repair of ships. No formal procedure is followed. Buying is done by the following field officers:

A. B. Wentworth, 45 Broadway, New York.

L. A. Holman, U. S. Maritime Terminal, Norfolk, Va.

Henry Samara, Federal Office Building, New Orleans, La.

E. C. Mausshardt, 200 Bush St., San Francisco, Cal.

Marine Corps

Quantities of leather, gloves, shoes, etc., are purchased as needed at the Marine Corps Quartermaster Depot, Philadelphia.

Treasury Department

The Procurement Division of the Treasury Department is the Government's largest buying agency in peace time and practically every product manufactured is included in its "General Schedule of Supplies." In addition to its normal buying activity, this department is now engaged in widespread buying for the account of the Lend-Lease program. For information as to supplies wanted and various field procurement offices address Procurement Division, U. S. Treasury Department, Washington, D. C.

Foreign Governments

Five foreign governments maintain purchasing agencies in the United States and are authorized to export certain materials under so-called unlimited licenses. These agencies are:

Amtorg Trading Corp. (Russia)—210 Madison Ave., New York, and Defense Building, 1026 17th St., N.W., Washington, D. C.

Belgian Congo Purchasing Commission —630 Fifth Ave., New York.

British Purchasing Commission—910 G. St., N. W., Washington, D.C., and 15 Broadway, New York.

Netherlands Purchasing Commission—10 Rockefeller Plaza, New York, and 744 Jackson Pl., N.W., Washington, D. C.

Universal Trading Corp. (China)—630 Fifth Ave., New York.

Work Shoes . . .

(Continued from page 21)

and their importance in the nation's productive drama. But the surface has been scratched. Shoe manufacturers and tanners are helping by making the leathers and the shoes that will keep America's 60 million workers properly shod. Government agencies and consumer leaders are lending their support. Employers are starting to figure the dollars and cents value of proper work shoes, and are reviewing their figures with surprise. Workers are finding that proper work shoes pay big dividends in comfort and health.

Good work shoes alone won't win this war, but it can't be won without them!

BIDS AND AWARDS

New Specifications

The following recent specifications covering leather products used by the Government have been listed in *Council News*, bulletin of the Tanners Council.

Overcoats, Leather, W.A.—PDQ No. 317, Dec. 22. 1942: Goatskin, cowhide, or horsehide, full grain, 2½ to 3 oz., chrome content not less than 3.5 per cent, Army russet shade.

Shoes, high, field—War Shipping Administration, WSADT 1017: Uppers of chrome retanned cowhide, natural color, 24 ft. or less to side, light snuffing permitted, 4½ to 5½ oz. Counters, insoles, and midsoles of leather: composition outsoles.

Mitten-Shell, trigger finger, Type I—CQD No. 105, Mar. 12, 1943, supersedes BQD 66.—Top grain, flexible native deerskin 3 to 3½ oz., chrome content not less than 3 per cent; 12 per cent pure oil requred in currying.

Shearling, Sheep—Air Corps 8-113-C, Dec. 3, 1942--Specification supersedes 8-113-B pf Dec. 26, 1940.

Shoes, Service, Types I and II—BQD 75B, Dec. 23, 1942—Supersedes BQD 75A of July 31, 1942. No changes in specifications for leather.

Parachute Jumpers Boots

The Boston Quartermaster Corps this week awarded contracts for a total of 165,000 pairs of parachute jumpers boots, the following firms sharing in the order:

International Shoe Co., St. Louis, Mo.—45,000 prs.

General Shoe Corp., Nashville, Tenn.—25,125 prs.

Brown Shoe Co., St. Louis, Mo.—24,750 prs.

R. P. Hazzard Co., Augusta, Me.—25,125 prs.

Milwaukee Shoe Co., Milwaukee, Wis. —15,000 prs.

Joseph F. Corcoran Shoe Co., Stoughton, Mass., 15,000 prs.

Albert H. Weinbrenner Co., Milwaukee, Wis.—15,000 prs.

Miscellaneous Awards

The Boston Quartermaster Depot has awarded the following miscellaneous contracts:

New Jersey Rubber Co., Taunton, Mass. —350 prs. of rubber composition half soles.

Seiberling Rubber Co., Akron, O.—2,184 prs. of half black rubber heels, wood core.

Leather Insoles

The Kistler-Lesh Co., Boston, has been awarded a contract by the Boston Quartermaster Depot for 60,000

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•

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pairs of leather insoles, and the Armour Leather Co., Chicago, has been awarded a contract for 135,000 pairs.

WAAC Shoes

The Green Shoe Mfg. Co., Boston, has been awarded a contract by the Boston Quartermaster Depot for 1,536 pairs of field shoes for the WAAC.

Lasts

The Boston Quartermaster Depot has awarded contracts for a total of 4,342 women's field shoe lasts and 8,000 women's low service shoe lasts.

Leather Outsoles

The Weyenbarg Shoe Mfg. Co., Milwaukee, has been awarded an order by the Boston Quartermaster Depot for 117,000 pairs of leather outsoles.

Service Shoes

The International Shoe Co., St. Louis, has been awarded a contract by the Boston Quartermaster Depot for 13,860 pairs of Type II service shoes.

. . . v ——

• *Tom Bailey*, formerly with *Beardmore & Co.*, leather manufacturer, Acton, Ont., is now with the *Department of National Defense* as leather inspector, stationed at Brampton, Ont.

EDITORIAL

(Continued from page 6)

be considered that shoes are made by numerous processes, each quite different from the others and each serving a particular shoemaking purpose. They are also made in a number of classifications for the various age groups, purposes, etc. They must be made in wide varieties of lasts and designs in order to fit the wide variety of human foot sizes and the wide variety of human footwear needs. If footwear was standardized too sharply the result would be far worse than a condition of footwear monotony. It would inevitably be a nation of hobbling, suffering foot cripples (unless feet can be standardized as well as shoes).

Some standardization is no doubt desirable. Over-standardization would be detrimental to the consumer and would not serve the needs of conservation and price control. Eighty per cent or more of *all* leather is used for shoemaking. And *all* leather includes so many kinds, weights, grades, etc., that over-standardization would place a terrific strain on the leathers selected for the standardized footwear, leaving the other leathers practically untouched. No one leather is available in anywhere near sufficient supply to meet alone the footwear needs of the nation.

The same thing is true of manpower conservation. Some types and grades of shoes require a lot of work (manpower) in their making. Others speed through factories like hamburger from a meat grinder. Where would standardization draw a line between shoes requiring least manpower to manufacture and those providing greatest street mileage after they are made?

The immediate attention focused on standardization derives from a desire to control price ceilings. In the past year, shoe manufacturers have been forced to employ substitute materials time and again. Some of these substitutes have far less wearing qualities than the materials they replaced, and others are less attractive and satisfying to the consumer. The OPA rightly takes the position that deterioration of quality without a compensating decrease in price is indirect price lifting. Very well, but how far can anyone go to correct this situation?

Shoe manufacturers are paying as much or nearly as much for most of the substitutes they are using as they paid for the original materials. Frequently they have to pay more, and almost always there is considerable manufacturing expense incurred in making the change. The consumer may be getting less value in some of his footwear than he did two years

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Brockton, Mass.

ago, but this is not a sufficient reason for lowering price ceilings. It must also be shown that manufacturers are profiting by the down-grading that has come with the war. Standardization may set a level of quality and a price commensurate with that level. But to do so is a difficult task (far more difficult than the task of establishing an equitable and just point rationing system, which the OPA feels is beyond its present capabilities).

It is too early to advance flat arguments for or against a shoe standardization program, but such a program should not be attempted until it has been carefully considered and thoroughly discussed from every angle by Government agencies and the shoe trade. An ill advised standardization program would injure both the shoe trade and consumers far more than it would ever help the war effort in any way.

DEATHS

Francis J. Better

. . . 47, a machine designer in the research division of the United Shoe Machinery Corp., Beverly, Mass. for the past 20 years, died suddenly April 7 at his home in that town. He was a member of the firm's Quarter Century Club.

He is survived by his widow, Lila D. Better; a sister, and three brothers.

Albert H. Jenkins

. . . 59, a director of the International Shoe Co., St. Louis, and head of the specifications department, died suddenly in the company's first aid hospital recently following a heart attack.

Mr. Jenkins had been with the shoe firm since 1912 when he started as an assistant auditor, rising to the post of assistant secretary, and becoming a director about 10 years ago.

He is survived by his widow, Maude L. Jenkins, and a son, Robert, who is with the Navy Air Corps.

Henry McCusker

. . . 83, president of the East Braintree (Mass.) Finishing Co., died Apr. 8 at the home of his daughter, Mrs. Florence Lynch, in Port Jefferson, Long Island, N. Y.

Mr. McCusker was for many years a leader in the processing of cotton goods. He was superintendent of the bleaching and finishing department of the Bates Mill, Lewiston, Me., and later was superintendent of the Aspinook Co. in Connecticut, and still later acting as agent successively of the Lewiston Bleachery and the Garner Print Works and Bleachery.

About 30 years ago he started his own business and plant at East Braintree and was active as its president almost to the day of his death.

He is survived by three daughters, Mrs. Florence Lynch, Mrs. William Hickie, and Mrs. W. A. Brown; and six sons, Maj. Joseph, Thomas, Edward, Lester, William, and John.

Arthur J. Bates

. . . member of the firm of Lewis & Bates, Vancouver, Quebec, representative for several eastern shoe firms, died recently at his home in Vancouver.

. . . V —

• Women form half the staff of the large *Army Salvage and Disposal Depot* at Halifax, N. S., a big part of which is the unusual job of repairing shoes. The women have proved both thorough and rapid workers and it is likely that more will be placed on the staff.

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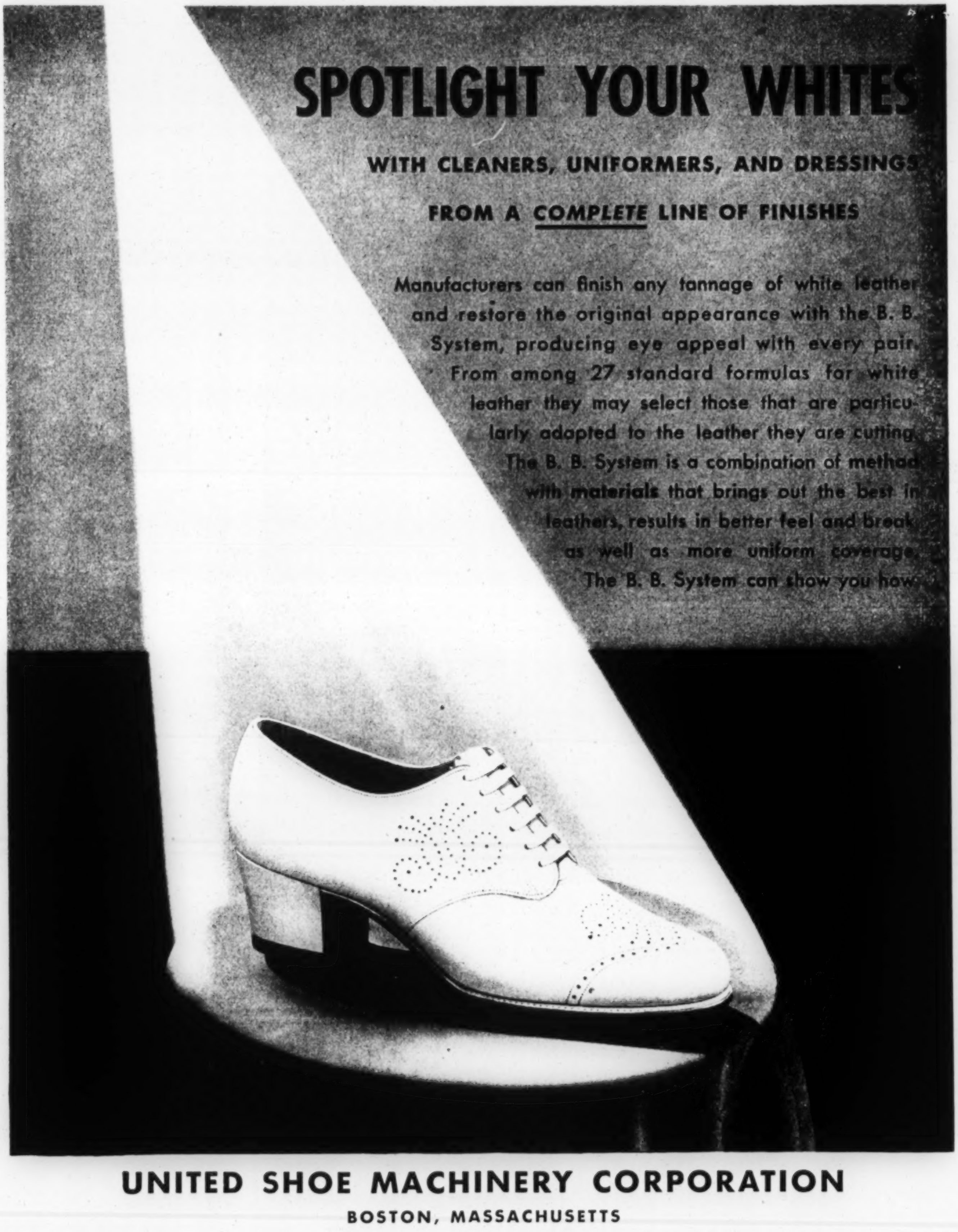

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Manufacturers can finish any tannage of white leather and restore the original appearance with the B. B. System, producing eye appeal with every pair. From among 27 standard formulas for white leather they may select those that are particularly adapted to the leather they are cutting. The B. B. System is a combination of method with materials that brings out the best in leathers, results in better feel and break as well as more uniform coverage. The B. B. System can show you how.

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SHOE FACTORY

A MONTHLY DEPARTMENT OF HIDE *and* LEATHER *and* SHOES

Working Women Are Getting Better Footwear for the Job

When Hide and Leather and Shoes began this study of the potential market for women's work shoes, and of the requirements of that market, it encountered three specific complaints.

Many shoe manufacturers asserted positively that women did not want the type of comfortable, safe, and durable footwear that would properly fall into a work shoe classification. Yet most of the manufacturers interviewed at the start of this study admitted that a real need for women's work shoes existed, and practically all of them expressed keen interest in the projected study and in discovering the possibilities of this potential market.

Shoemen were strongly of the opinion, in many cases, that women would not buy suitable work shoes unless they were sold under some glamorous name that would imply the footwear was anything but what it actually was. They shuddered at the very mention of the words "work shoe" in the women's field.

At the same time, Rosie the Riveter and her millions of working sisters bluntly declared they wanted work shoes and didn't know where to get them. They admitted that comfortable and satisfactory shoes were available, but complained that sizes were not always complete, sales service was not always helpful, and identification of suitable work shoes as distinguished from dress shoes was practically nil. Thousands of working women in varied occupations told Hide and Leather and Shoes what kind of work shoes they wanted and how much they would pay for such shoes.

The details of these phases of the study have been reported in earlier articles. This article concludes the series of reports which started last June. It sums up the great change that has taken place in the past year in the women's shoe field.

Millions of new female employes are working in factories, shops, restaurants, offices, and hundreds of widely varied occupations. The working girl is no longer the tolerated, and frequently exploited, "gainfully occupied" woman. Today she is the backbone of American industry and commerce and what she wears, what she eats, and what she thinks are nearly as important as how she works.

This has resulted in a steadily improving condition in regard to work clothing for women. Manufacturers and designers have developed attractive apparel with new features of comfort and safety. Department stores devote much space to collections of work clothing and make extra special efforts to cater to the wants of their working customers.

Much Has Now Been Accomplished

Much has been accomplished; much remains undone in the provision of suitable work clothing for women, and particularly in the provision of suitable work shoes.

A year ago it would have been difficult to compile a very comprehensive list of manufacturers who would be willing to be considered as sources of supply for "women's work shoes". Today there are scores of leading firms represented in the list accompanying this article, who have selected from their standard lines the shoes most suitable for work wear, or who have developed special shoes for work wear, and who are offering these to their distributors primarily as work shoes. This is a tremendous advance. Still more important, most of these firms are not only cultivating the immediate war-created demand for work shoes, but are also looking ahead to the post-war market, and to continued development of a field that has been so long neglected—the field of women's work shoes.

Eleventh of a series by

Alfred Henderson

Concluding the Reports on HIDE and LEATHER and SHOES' study of women's work shoes

Retailers are cooperating with the manufacturers in this effort. Department stores, chains, and independent shoe stores throughout the country are stressing more and more the theme of "women's work shoes" and are carefully endeavoring to meet the needs of their customers. They are studying those needs to analyze the prevailing occupational conditions in their territory, and the footwear best suited for those occupations. They are getting advice from shoe manufacturers, from Government agencies, from consumer

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Womanpower and manpower work together in the building of giant planes for Victory. Suitable shoes are important to both, but until recently the men were the only ones who could secure satisfactory and clearly identified work shoes. Much has been accomplished in improving the women's work shoe situation. Much remains to be done.

Official OWI Photo by Hollem

groups, and from employers. They are listening to the comments of their customers. They are learning a lot about the shoe needs of the working woman!

Many large employers of women are making work shoes available through their own company stores. Many others are displaying approved shoe styles prominently in their plants and are advising where the recommended footwear can be obtained. Many are cooperating closely with local dealers, recognizing that suitable work shoes increase the comfort, safety, and efficiency of their women employes.

The National Safety Council is urging improved advertising of work clothes, the American Standards Assn. is continuing to develop rigid standards for women's work shoes, other Government agencies are following the development of the women's work shoe very carefully.

Women designers who were first called in to consult with women themselves on what details they would suggest incorporating in factory uniforms know enough about the workings of the female mind to consider the difficulties of imposing standards of dress. Designers have learned that like their sisters and aunts in the home or in other fields, these plant workers bitterly resent being made into uniformed robots. But they are quick to adopt those types of safety clothing, headgear, and footwear when the necessity for them is presented in the right way; that is, as a suggestion for maintaining personal safety, and not as a factory ruling making them part of the herd.

Performance tests of clothes designed by these women, several of them eminent in the field of fashion designing in New York, have now proven that efficient safety clothing can also be good-looking. In plants and factories where these garments have been worn by the women—bought at a nominal sum in majority of cases, supplied to the workers only in a few cases where factory hazards require such articles as leather aprons and safety helmets and goggles—it has been possible to compare the efficiency of the women in correct factory garb and those in makeshift working clothes. Comparison tests prove overwhelmingly the improved efficiency of correctly garbed women workers. Outstanding examples are the new Flying Fortress Fashions designed for Boeing workers by Muriel King.

But there is one type of thinking on this subject, that predicates all planning on the basis of standardized *safety* clothing and *safety* footwear. Yet most plant managers have been reluctant to impose rules for standardized garments, often because of opposition by certain union factions. The Bridgeport, Conn., women workers who just staged a strike in an airplane factory were rebelling against the management's ban on sweaters worn by the women *over* the mandatory plant uniforms. Management had a perfect right to prohibit sweaters as unsafe, but the ban was enforced without thorough investigation.

The uniforms were made of materials that did not stand up well after repeated washings, and that shrank so badly the girls could not wear them without discomfort. In addition to shrinking, the uniforms were too light in weight for the cold weather this winter in Connecticut. The plant was large and airy and drafty, so the women wore sweaters for *warmth*, not glamour.

This is a glaring example of a prescribed uniform that was not up to a standard required for the job. Yet this very uniform had been passed by a safety engineer before it was adopted. That's why the practical designers now working on models which go eventually to the safety engineers are careful first to get the real "low-down" on what types make sense, right from the little girls themselves in the factories.

New Standards Adopted

And now work clothes and factory uniforms generally are going through another test. The WPB has requested safety engineers and factory specialists to cooperate with the American Standards Assn. to simplify types of garments, and establish rigid specifications for safety and efficiency of these garments. Styles tested first under working conditions in plants, and endorsed by women workers for comfort and good looks, are the basic types which have been further corrected by American Standards Assn. to conform to safety specifications.

The next year will test out the theories of these specialists, when garments made under new specifications are actually in production and when the women are exposed to them. It takes no crystal gazing to predict that these millions of industrial workers will maintain their united front for individuality in spite of clothing uniformity. It may be through their head coverings, by means of a colored handkerchief or an embroidered insignia, but something different is sure to be added.

Many occupations requiring a practical efficient uniform demand a *well fitted comfortable shoe* that is

The case of the missing box toe heater

Neither Scotland Yard nor the Crime Club can solve it. Frankly, we're baffled. Read the evidence. If possible, find the motive and work out the solution.

BUY BONDS FOR BLOCK BUSTERS

GONE! Yet our records list it on loan and in use. Not to be found in lasting room, stock room, or cellar — gone into thin air! Last seen two months ago, wearing a copper overcoat, in the company of Old Man Hindsight, as vicious a villian as ever trod the boards in an Op'ry House meller-drammer.

Seriously, its loss is important. Not one, but hundreds of irreplaceable box toe heaters made from critical copper, stainless steel, brass, and cast iron have been lost by careless handling — usually through putting off their return until tomorrow as today seems short of minutes. We cannot make *new* box toe equipment for the duration. Our 1943 complement is being served to Messrs. Hirohito & Co. as part of an indigestible metal diet, and though our stocks are complete, we no longer have an abundant supply of heaters to cover needless shortages.

Box toe heaters are as important to you as they are to us. Don't lose them. Don't store them. When replaced for any reason, return them *at once*. Take care of them by following a few simple rules and add months to their span of efficient usefulness.

DON'TS for box toe heaters. (Please pass on to lasting room foreman.)

Don't operate electric heaters at voltages in excess of the unit resistance marked on each heater.

Don't operate heaters without water in boilers.

Don't carry water supply cans by the spout — use handle.

Don't fail to clean gas burners every six months.

Don't order units, water cans, and other supplies in excess of the amount actually needed.

Don't retain heaters not needed on the line.

Don't stock them "for the time being." Send them back.

BECKWITH MANUFACTURING CO., DOVER, N. H.

BECKWITH
BOX TOES

VICTORY ARMY E NAVY PLASTICS

definitely *not* a safety shoe. The reason for this is obvious to shoemen and foot health specialists, but is often ignored by the personnel managers and safety engineers. The accepted safety shoe is a shoe with a steel reinforced forepart, now made by a number of factories following its specification in detail by American Standards Assn. (H&L&S, Mar. 6).

This steel toe safety toe is certainly essential protection against hazards from falling objects, etc. It is extremely uncomfortable unless it is made over a very high, broad last and unless it is most carefully fitted (which it seldom is) as the steel box has a tendency to press down on the toes. In shipyards where women are wearing *men's work boots* with safety toes they seem to be quite comfortable. Yes, you guessed right—the shoes are plenty large, since sizes below six are not available, and the shoes are very broad, and also the women wear two pairs of heavy socks with them.

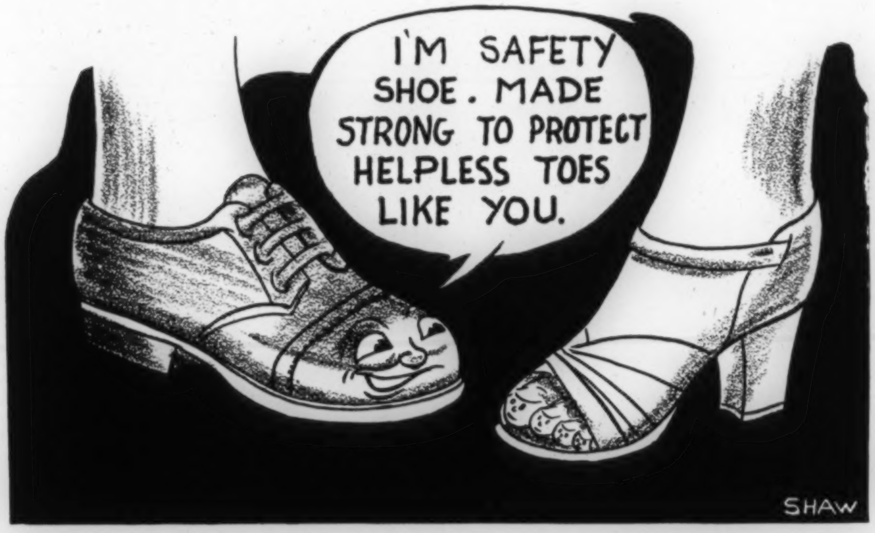
That explains why women gave up wearing regular steel toe safety shoes after a few days in some plants visited. They hurt their feet, so they went right back to wearing flimsy shoes or discarded dress shoes. Most of them have enough sense of fashion to realize that high heeled shoes "don't look so hot." Low heel shoes look smarter with slacks, so more of them wear low heeled shoes, even if they are not wearing otherwise acceptable types of shoes.

Safety Council Convention

Last week in New York at the annual convention of the Greater New York Safety Council, new light was thrown on this whole subject of correct clothing. It was shown conclusively that women do not expect to look like glamour girls on the job. But they do prefer to look as trim and attractive as possible. One speaker said that women workers in the large plants visualize themselves now in uniforms as the typical clothes of the day. This is a great step forward from the period when women were reluctant or flatly refused, to wear any type of uniform.

Recently it has developed that, since shoe rationing went into effect and a wider application of rationing is anticipated in the future, women are glad to wear plant uniforms because they are comfortable and good looking, and they also save their street clothes. The same holds true for their footwear, in some cases they have been able to get their occupational or work shoes by special OPA certificate, thus saving their No. 17 coupon for off-duty shoes.

At other sessions of this convention speakers on industrial health brought out the necessity for protecting the foot health of workers. Several mentioned the necessity for the proper footwear, to maintain efficiency and to protect foot health. But it is worth noting that not one of these speakers was fully informed on the subject of correct industrial footwear. The low heel types with leather soles, and with steel safety toe to withstand 200 pounds of pressure were the only work shoes recommended in the many sessions. The fact that many other types of footwear, with other types of plastic or moulded toe boxes might be just as acceptable from the safety standpoint for hundreds of occupations was not mentioned.


I'M SAFETY SHOE. MADE STRONG TO PROTECT HELPLESS TOES LIKE YOU.
SHAW

Feet First

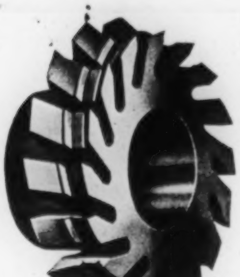
Types of feet are what the experts need to study next if they hope to prescribe the right kinds of work shoes. Most specialists in this field list all the factory hazards, and attempt to combine in one shoe, protection against all of them. This is simply impossible. There is no reason to produce such a safety shoe. But there is a reason for studying the shoes available in various styles and grades at the present time, in relation to the feet of workers and their specific shoe needs.

Fatigue traced to common foot strain has been shown in reports from medical authorities to be a vital factor in the breakdown of efficiency of industrial workers. In several large plants where medical departments are staffed with specialists, the most recent staff additions are podiatrists who make careful checks on foot health of the workers. While this is not a general practice, it is a notable advance in modern protective medical procedure and a type of clinical work which might eventually influence the whole field of industrial foot health.

Earlier this year, at the January meeting of the Podiatry Society of the State of New York, which was announced as a Mobilization for Foot Health in Wartime, prominent men and women in the fields of foot health and industrial health, and representatives of national safety organizations, participated in the program.

Before an audience of over 200 assembled at the Hotel Pennsylvania the speakers presented various aspects of the problems which have been enormously increased during the past 18 months, in protecting foot health of the armed forces and the new army of industrial workers. Correctly fitted shoes, shoes fitted by experts, go a long way in solving these problems, it was agreed by various speakers. Instances of shoes incorrectly fitted, shoes that were the right type for the job, but the wrong shoes for the particular feet, were cited by one speaker. It was stressed by these specialists that cooperation of shoe retailer, plant manager, and foot health advisor can build up a powerful force to protect the national foot health.

Such cooperation means that the podiatrist in charge of foot health in the plant clinic works with the plant management to encourage the wearing of the right types of footwear—*various* types, not just one standardized model for all operations. The podiatrist receives the benefit of the



MORE FREQUENT GRINDING MAKES EDGE CUTTERS LAST LONGER

GOOD GRINDING
GAVE THIS CUTTER
MAXIMUM LIFE

Sounds impossible but it's true. A quick "touchup" grinding the moment edge trimming cutters begin to pull, plus care in grinding will make cutters last longer.

Here are six suggestions that will help you get more service from Forepart and Heel Seat Cutters:

1 **The minute a cutter begins to get dull, sharpen it.** Letting a cutter get too dull means a harder, longer job of grinding.

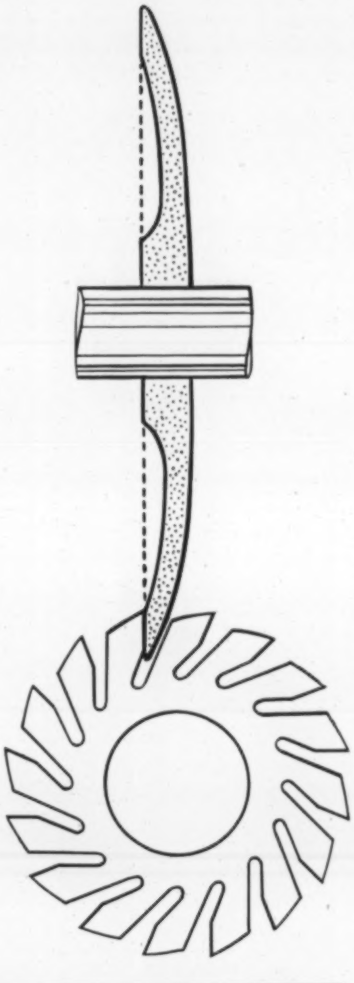
2 **Light, even applications to the wheel are best.** A brief touch-up grinding will minimize burning which may alter or change the temper of the steel and thereby cause the cutter to dull faster or teeth to wear unevenly.

3 **Take care to preserve the rake of the teeth when resharpening dull cutters.**

4 **Protect cutters in use.** A tight-fitting shield prevents trimming residue from working in between shield and cutter. Cutters so packed may run unevenly and lips may become broken. When fastening cutters on the shaft make sure the opposing surfaces of shield and cutter are clean.

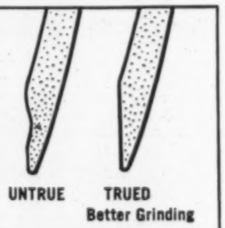
5 **Handle cutters with care.** Dropping cutters where they will fall against machinery or on the floor may chip a lip or edge. The cutter may be ruined or require valuable time, labor and loss of metal to put it in serviceable condition.

6 **Be sure you get the most out of every cutter.** Too often cutters are discarded with two or three more days' work in them. With proper care from the very beginning, cutter life can be extended.



Dull cutters take more power—turn out poorer work and less production. More time is lost by trying to do an extra case with a dull cutter than by making short, more frequent stops to keep cutters sharp. Start today to make cutters last longer.

Keep sharpening wheel dressed. Sharpening wheels perform better when trued. As soon as unevenness appears, an Emery Wheel Dresser should be used to even and renew the flat grinding surface.



USMC

These cutter conservation suggestions are published to help users get the greater production and longer wear so vital in these critical times.

TAKE GOOD CARE OF WHAT YOU HAVE

UNITED SHOE MACHINERY CORPORATION
BOSTON, MASSACHUSETTS

shoe retailer's knowledge of the shoe market in obtaining the correct types of shoes. These are processed in the plant or at the retailer's store, at a nominal mark-up, which provides for careful fitting service by the retailer's trained personnel. Shoes sold at cost by the plant are seldom fitted correctly since the uniform department cannot afford the services of a fitting expert.

All of these factors point the way to better footwear worn by men and women in all industrial occupations. As far as work shoes for women are concerned, it is now manifest that and at long last the shoes are in the process of being manufactured. Unfortunately, several of the best types of conductive and non-conductive shoes for men and women, developed in addition to the mandatory type for Government arsenals, and other protective types, are now eliminated from factory lines due to the latest regulations under M-217. Platforms which did away with the necessity for steel shanks, for example, are now prohibited.

But there are plenty of good shoes in the works being made ready for workers. Granted that plant management, safety engineers and the WPB can see eye to eye with the shoe manufacturers who are ready with these varied types to fit varied occupations, varied operations, varied hazards, and varied types of feet, then the millions of war workers will be correctly shod to do their jobs. These shoes are varied as to last measurements, they are varied as to heel heights. There are styles with four eyelets and there are high six eyelet oxfords, just as there are heels ranging from 9/8 to 14/8, in order to benefit as many types of feet as possible.

Style Is Important

One of the arguments against women's work clothes—and work shoes—was that women were more interested in style than in comfort and safety, even while on the job. This was disproved, as far as shoes are concerned, when Hide and Leather and Shoes found that women placed style far below comfort, safety, and durability in outlining their work shoe wants.

At the same time, the style factor is important and should not be overlooked. Safety engineers themselves in general welcome rather than oppose, style in work garments, according to J. M. Roche, industrial safety engineer for the National Safety Council, who has been loaned to the U. S. Maritime Commission as its chief safety consultant.

"Obviously, the first requirement must be that garments be strong and well made for the particular jobs on which they are to be worn," Mr. Roche said recently. "Glamour is a secondary consideration. However, in terms of morale, attitude, and sustaining of a woman's interest in her war job, it is important to design garments that are just as attractive as possible. Manufacturers have already demonstrated convincingly that a variety of styling, color, and material can be incorporated into work garments for women without sacrificing a bit of utility or safety."

There is no reason why women's shoes for general work wear cannot be attractive and why they should not be smartly styled; there are very good reasons why they should be. If war conditions are used as an excuse for neglect of shoe styles or for uglification of footwear, then the shoe industry will have lost a great deal of the ground it has gained as a fashion industry. This would be unnecessary and unwise.

Shoes for Ship Workers

Representatives of 90 per cent of the American shipbuilding industry recently recommended standards for clothing and personal protective equipment for women shipyard workers. The recommendations covered a broad field of work clothing, and some were of particular interest to the shoe industry which is now not only making shoes for industrial and war uses, but other equipment as well in many cases.

Welders' garments, the recommendations state, should include a flame proofed coverall or a two piece outfit consisting of wool trousers and shirt, plus a flame proofed welder's leather set. Welders' leathers should be the same for women as men's leathers except that they should be styled to fit the feminine figure. Experience indicates the necessity for extra ventilation in welders' jackets.

It is recommended that all production workers except welders and burners wear gloves of a material suitable for the work being done, such as cotton, canvas, leather, leather palms, and gloves with or without gauntlets. For welders and burners it is recommended that leather gloves with gauntlets be worn, but that they be provided with an elastic wristlet, set one-third the distance from the top of the gauntlet, that will closely circle the wrist above the bottom of the shirt cuff and prevent the entrance of hot slag into the glove.

Rugged safety shoes are recommended for all employes. The shoes should be made of leather comparable to that used in men's shoes, and provided with steel or plastic toe caps. All shoes should have low heels, leather or corded type soles and heels, and safety shoes should comply with the American Standard Code. Oxford types are recommended for general employe wear, and high shoe types for welders and burners. Pull-on boots with a strap across the instep are also suggested.

War Standards

The American Standards Assn., which has been developing war footwear standards at the request of the War Production Board and the Office of Price Administration, has already issued standard specifications for women's safety toe oxfords, approved Feb. 12, 1943. These standards were summarized in the Mar. 6 issue of Hide and Leather and Shoes.

This week the ASA announced drafts of proposed American War Standard Specifications for women's safety toe high shoes, women's explosives operations (non-sparking) shoes, and women's conductive shoes. It is expected that these standards will be approved soon and then released to the shoe trade.

The development of suitable work footwear for all working women has only begun, but an excellent start has been made. Shoe designers, manufacturers, and distributors are working to provide the good work shoes which working women have long sought in vain. They are doing this now as a vital contribution to the war effort, and at the same time they are studying the potentialities of a post-war market for the classification of women's footwear which still does not exist but which heretofore had not even been considered essential. The millions of women who will carry on their share of the work that must be done in a post-war world will undoubtedly be better shod on the job than the millions who preceded them have ever been.

Findings of H&L&S Study To Be Summarized

The further developments that will take place in this field will be reported in the news columns of Hide and Leather and Shoes and in special articles from time to time. The findings of Hide and Leather and Shoes' extensive study of this subject have been made available to the industry, Government agencies, consumers and others. They will be summarized for ready reference in a single review article which will be published soon.

Manufacturers Who Are Making Women's Work Shoes

THE following manufacturers of women's footwear are currently making models which are offered as meeting the requirements of women's work wear in factories, stores, restaurants, laundries, etc. The information about lines offered and retail price ranges (which are shown in parentheses) was obtained directly from each manufacturer.

The footwear in the following lists includes only closed shoes with low to medium heels, which are designed and constructed for comfort and durability under the conditions of work wear for which they are recommended by the manufacturer. No flimsy, open types, or strictly dress shoes are included.

For convenience, the manufacturers' offerings are separated into major groups. They include regular types of oxfords and similar shoes for wear where no special occupational condition or hazard exists, and also safety shoes and special types of work shoes. Many of the standard oxfords have been redesigned somewhat to include additional features for work wear. Many of the shoes in the following list are being actively advertised and promoted as "work shoes" or "defense shoes", and distribution is being made through regular retailing channels or through company stores in plants employing large numbers of women.

Additional information about any of these work shoes may be obtained direct from the manufacturers.

Sport and Walking Oxfords

Air-Kushin Shoes, Inc., Cincinnati, O. ($4.00).

Air-Tred Shoes, Inc., Auburn, Me. ($5.95-$6.95).

Alberts Shoe Co., Middleboro, Mass. ($3.00-$5.00).

Allied Shoe Co., Elgin, Ill ($5.50-$6.50).

Altman Bros. Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).

D. Armstrong & Co., Rochester, N. Y. ($12.50 up).

Avon Shoe Co., Inc., Jersey City, N. J.

L. E. Beaudin Shoe Co., Hanover, Pa. ($2.98-$3.98).

Boyd-Welsh, Inc., St. Louis ($9.95; $10.95; $11.95).

Brown Shoe Co., St. Louis ($3.00-$6.00; $6.95).

California Shoes, Ltd., Los Angeles, Cal. ($5.95; $6.95; $7.95; $8.95).

Carlisle Shoe Co., Carlisle, Pa. ($8.95-$10.95).

Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).

Curtis-Stephens-Embry Co., Reading, Pa. ($5.00-$6.00).

Charles Cushman Co., Auburn, Me. ($2.50-$3.50).

Walker T. Dickerson Co., Columbus, O. ($9.50-$10.50).

Dixon-Bartlett Co., Baltimore, Md. ($8.95-$10.95).

Dodson-Fisher Co., Minneapolis, Minn. ($4.00-$5.00).

Gardiner Shoe Co., Gardiner, Me. ($4.00).

Irving Drew Corp., Lancaster, O. ($7.95-$8.95).

Freeport Shoe Co., Freeport, Me.

General Shoe Corp., Nashville, Tenn. ($4.00-$5.50).

Gerlach's, San Francisco, Cal. ($5.85-$10.85).

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Whitman, Mass. Johnson City, N. Y. Columbus, Ohio Cincinnati, Ohio Chicago, Ill. Milwaukee, Wis. Kitchener, Ont. St. Louis, Mo. Westfield, N. J. Los Angeles, Cal.

Gilbert Shoe Co., Thiensville, Wis. ($7.00-$7.50).

Grossman's Shoes, Inc., Brooklyn, N. Y.

Holmes, Stickney & Walker, Inc., Portland, Me. ($5.00-$6.00).

Hubbard Shoe Co. Inc., Rochester, N. H. ($3.00-$3.45).

Huiskamp Bros. & Co., Keokuk, Ia. ($5.00-$7.00).

Huth & James Shoe Co., Milwaukee ($4.00; $5.00; $6.00).

International Shoe Co., St. Louis.

R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).

Irving Shoe Co., Chicago ($6.00).

James Shoe Mfg. Co., Milwaukee ($6.95).

Johansen Bros. Shoe Co., Inc., St. Louis ($7.95 up).

Joyce, Inc., Pasadena, Cal. ($6.50-$7.95).

Juvenile Shoe Corp., St. Louis, Mo. ($5.85-$6.85).

Kane, Dunham & Kraus, Inc., St. Louis ($6.00-$6.75).

Kopman Woracek Shoe Mfg. Co., Flat River, Mo. ($3.00-$4.00).

Krippendorf Dittman Co., Cincinnati, O. ($6.95-$7.95).

Laird, Schober & Co., Inc., Haverhill ($8.95-$10.50).

J. Mackey & Son, Jersey City, N. J. ($5.00 up).

Marshall, Meadows & Stewart, Inc., Auburn, N. Y. ($8.95-$12.75).

Medway Shoe Mfg. Corp., Medway, Mass. ($1.75-$2.00).

Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).

Milius Shoe Co., St. Louis ($5.00-$7.50).

P. W. Minor & Son, Inc., Batavia, N. Y. ($7.50).

Muskin Shoe Co., Baltimore, Md. ($3.00-$4.00).

O'Donnell Shoe Co., Humboldt, Tenn. ($6.00-$8.50).

Owens Shoe Co., Salem, Mass. ($4.00-$5.00).

Paramount Shoe Mfg. Co., St. Louis, Mo. ($6.95 up).

Schawe-Gerwin Co., Cincinnati, O. ($5.00).

Selby Shoe Co., Portsmouth, O. ($6.95-$12.95).

Simplex Shoe Mfg. Co., Milwaukee ($5.75-$6.95).

J. P. Smith Shoe Co., Chicago ($10.95-$12.95).

Sam Smith Shoe Corp., Newmarket, N. H. ($5.00).

Spalsbury Steis Deevers Shoe Co., St. Louis ($5.00-$6.00).

Stetson Shoe Co., S. Weymouth, Mass. ($10.95 up).

Tweedie Footwear Corp., Jefferson City, Mo. ($7.95).

Weyenberg Shoe Mfg. Co. (Hubbard Shoe Co. branch), Milwaukee ($4.00-$6.50).

Orthopedic and Comfort

Air-Kushin Shoes, Inc., Cincinnati, O. ($4.00).

Air-Tred Shoes, Inc., Auburn, Me. ($5.95-$6.95).

Altman Bros. Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.50).

D. Armstrong & Co., Rochester, N. Y. ($12.50 up).

Brown Shoe Co., St. Louis ($4.00-$8.00; $6.95).

Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).

Walker T. Dickerson Co., Columbus, O. ($9.50-$10.50).

Irving Drew Corp., Lancaster O. ($7.95-$8.95).

Fikany Shoe Corp., Rochester, N. Y. ($12.95).

Gerlach's, San Francisco, Cal. ($8.50-$15.00).

Grossman's Shoes, Inc., Brooklyn, N. Y.

Grossman Shoe Co., Inc., Parkersburg, W. Va. ($4.00-$5.00).

Holmes, Stickney & Walker, Inc., Portland, Me. ($5.00-$6.00).

Hubbard Shoe Co., Inc., Rochester N. H. ($3.00-$3.45).

Huiskamp Bros. & Co., Keokuk, Ia. ($5.00-$7.00).

International Shoe Co., St. Louis.

R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).

Irving Shoe Co., Chicago ($6.00).

Juvenile Shoe Corp., St. Louis ($6.00-$7.00).

L. V. Marks & Sons Co., Cincinnati, O. ($4.00-$5.00).

Marshall, Meadows & Stewart, Inc., Auburn, N. Y. ($8.95-$12.75).

Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).

P. W. Minor & Sons, Inc., Batavia, N. Y. ($9.00-$10.50).

National Shoe & Leather Co., Inc., Epping, N. H. ($2.50-$3.00).

O'Donnell Shoe Co., Humboldt, Tenn. ($7.50-$10.50).

Olympic Shoe Co., Lynn ($4.00-$6.00).

Selby Shoe Co., Portsmouth, O. ($6.95-$12.95).

Simplex Shoe Mfg. Co., Milwaukee ($6.50-$6.95).

Somerset Shoe Co., Skowhegan, Me.

P. Sullivan Shoe Co., Cincinnati, O. ($4.00-$5.00).

Tweedie Footwear Corp., Jefferson City, Mo. ($7.95).

Moccasins

Brown Shoe Co., St. Louis, Mo. ($3.00-$6.00).

California Shoes, Ltd. ($5.95-$7.95).

Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).

Curtis-Stephens-Embry Co., Reading, Pa. ($5.50).

Charles Cushman Co., Auburn, Me. ($2.25-$3.00).

L. B. Evans' Son Co., Wakefield, Mass.

Gilbert Shoe Co., Thienville, Wis. ($7.00-$7.50).

Hubbard Shoe Co., Inc., Rochester, N. H. ($3.00-$3.45).

Huiskamp Bros., Keokuk, Ia. (moccasin type welts) ($5.00-$7.00).

Huth & James Shoe Co., Milwaukee ($4.00; $5.00; $6.00).

International Shoe Co., St. Louis.

Kopman Woracek Shoe Mfg. Co., Flat River, Mo. ($3.00-$4.00).

J. Mackey & Son, Jersey City N. J. ($3.00 up).

Muskin Shoe Co., Baltimore, Md. ($3.00-$4.00).

Owens Shoe Co., Salem, Mass. ($4.00-$5.00).

Sawyer Moccasin Co., Bangor, Me. ($3.00-$4.00).

Viner Bros., Bangor, Me.

Boots

Gerlach's, San Francisco, Cal. ($12.85-$13.85).

Hubbard Shoe Co., Inc., Rochester, N. H. ($3.00-$3.45).

International Shoe Co., St. Louis.

R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).

J. Mackey & Son., Jersey City, N. J. ($6.00 up).

O'Donnell Shoe Co., Humboldt, Tenn. (jodhpurs) ($9.50-$12.50).

Nurses'

Air-Kushin Shoes, Inc., Cincinnati, O. ($4.00).

Air Tred Shoes, Inc., Auburn, Me. ($5.95-$6.95).

Alberts Shoe Co., Middleboro, Mass. ($3.00-$5.00).

Allied Shoe Co., Elgin, Ill. ($5.50-$6.50).

Altman Bros. Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).

D. Armstrong & Co., Rochester, N. Y.

Brown Shoe Co., St. Louis ($4.00-$6.95).

Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).

Curtis-Stephens-Embry Co., Reading, Pa. ($5.50-$6.00).

Charles Cushman Co., Auburn, Me. ($3.00).

Walker T. Dickerson Co., Columbus, O. ($9.50-$10.50).

Dodson-Fisher Co., Minneapolis, Minn. ($4.00-$5.00).

Gardiner Shoe Co., Gardiner, Me. ($4.00).

Irving Drew Co., Lancaster, O. ($7.95-$8.95).

Fikany Shoe Corp., Rochester, N. Y. ($12.95).

Gerlach's, San Francisco, Cal. ($8.50-$12.85).

Gilbert Shoe Co., Thiensville, Wis. ($7.00-$7.50).

Grossman's Shoes, Inc., Brooklyn, N. Y.

Grossman Shoe Co., Inc., Parkersburg, W. Va. ($4.00-$5.00).

Holmes, Stickney & Walker, Inc., Portland Me. ($5.00-$6.00).

Hubbard Shoe Co., Inc., Rochester, N. H. ($3.00-$3.45).

Huiskamp Bros., Keokuk, Ia. ($5.00-$7.00).

Huth & James Shoe Co., Milwaukee ($5.00-$6.00).

International Shoe So., St. Louis.

R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).

Irving Shoe Co., Chicago.

Johansen Bros. Shoe Co., Inc., St. Louis ($7.95 up).

Kopman Woracek Shoe Mfg. Co., Flat River, Mo. ($3.00-$4.00).

Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).

P. W. Minor & Son, Inc., Batavia, N. Y. ($8.50-$10.50).

National Shoe & Leather Co., Inc., Epping, N. H. ($2.50-$3.00).

O'Donnell Shoe Co., Humboldt, Tenn. ($6.95-$10.00).

Olympic Shoe Co., Lynn ($4.00-$6.00).

Owens Shoe Co., Salem, Mass. ($4.00-$5.00).

Selby Shoe Co., Portsmouth, O. ($6.95-$10.95).

Simplex Shoe Mfg. Co., Milwaukee ($5.75-$6.95).

Sam Smith Shoe Corp., Newmarket, N. H. ($5.00).

Somerset Shoe Co., Skowhegan, Me.

Spalsbury Steis Deevers Shoe Co., St. Louis ($5.00).

P. Sullivan Shoe Co., Cincinnati, O. ($4.00-$5.00).

Weyenberg Shoe Mfg. Co. (Hubbard Shoe Co. branch), Milwaukee ($5.00).

Special Work Shoes

Air Tred Shoes, Inc., Auburn, Me. ($5.95-$6.95).

D. Armstrong & Co., Rochester, N. Y. ($12.50 up).

Curtis-Stephens-Embry Co., Reading, Pa. (wood soled) ($6.50).

Gerlach's, San Francisco, Cal. (welders' boots) ($13.85).

Johansen Bros. Shoe Co., Inc., St. Louis ($7.95 up).

Sam Smith Shoe Corp, Newmarket, N. H. (semi-safety) ($5.00).

Spalsbury Steis Deevers Shoe Co., St. Louis (protective toes) ($5.00-$6.00).

F. J. Stahmer Shoe Co., Davenport, Ia. (wood soled) ($2.50-$3.50).

Safety Shoes

Brown Shoe Co., St. Louis ($5.00).

Craddock-Terry Co., Lynchburg., Va. ($4.00-$6.00).

Charles Cushman Co., Auburn, Me. (steel toes) ($4.00-$5.00).

Hubbard Shoe Co., Inc., Rochester, N. H. ($5.00).

International Shoe Co., St. Louis.

James Shoe Mfg. Co., Milwaukee ($6.95).

Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).

Muskin Shoe Co., Baltimore, Md. ($4.00).

O'Donnell Shoe Co., Humboldt, Tenn. (conductive) ($7.50-$10.50).

Schawe-Gerwin Co., Cincinnati, O. ($5.00).

Simplex Shoe Mfg. Co., Milwaukee ($6.95-$7.50).

Spalsbury Steis Deevers Shoe Co., St. Louis ($6.00).

Note—The Gold Seal Shoe Co., Boston, manufactures sport and walking oxfords, orthopedic and comfort shoes, moccasins, and nurses' shoes suitable for inclusion in the above lists. However, these are for distribution only through A. S. Beck stores and are not available to other retailers.

Women Are Being "Conditioned" For Conservative Post-War Shoes

By William A. Rossi

THOSE who think that pre-war and post-war conditions in the women's shoe industry will be the same may be in for a few "hot-foot" surprises.

It is probable that present restrictions on heel heights and styles is not altogether a war emergency. It is the sounding note of the new trend in women's footwear and consumer demands for the post-war era. Mrs. and Miss Consumer are slowly but surely being "conditioned" to more conservative footwear. Thousands of more pairs of durable wartime shoes are being made for civilians, although the total number of shoes made will be 100,000,000 pairs less than in 1942. Emphasis is on the practical.

One prominent New York women's shoe retailer said, shortly after shoe rationing went into effect, "We're carrying up to 50 per cent in "sensible" shoes now as compared with only five per cent stocked before rationing. After the war I don't think we'll be able to get along without at least 30 per cent of our stock being on the conservative models."

No, the stylish and novelty shoes aren't doomed and never will be as long as woman is woman. But they'll probably not see the lush, flourishing days of old. The conservative models are in for the real boom, now and after the war. There are substantial reasons for believing that the trend is strongly in this direction.

The changes will be chiefly with heel heights, size ranges, last de-

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INDEPENDENT DIE & SUPPLY CO.
La Salle Near Jefferson St. Louis, Mo.

HOWES BROS. CO.
SOLE LEATHER AT ITS BEST
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signs, styles, and materials. Not temporary wartime changes, mind you, but a definite move toward new conditions.

Now set this fact indelibly in your mind: the keynote of the post-war world is expressed in one word, *utilitarian*. It is no longer a man-dominated world. Women in industry, in business, in military organizations. No longer the lady of leisure or the household drudge. It's the *practical* woman.

This means tremendous influence on women's clothing is in the making. All clothing, including shoes, will be patterned and constructed to express utility and practicability. The transitional today is merely the bridge between the frilly yesterday and the utilitarian tomorrow in footwear.

All right, what and why will these changes be in women's footwear?

Heel Heights: Rationing has fixed these to a 21/8 limit. There is a good possibility that this height limit may continue after the war. During the last dozen years women have become low heel conscious. This has been due to "conditioning" by various influential sources. Physicians, foot doctors, and other professional groups have been strongly selling the women the low heel habit. These groups are authoritative enough to carry convincing weight. The pressure of their arguments had begun to take noticeable effect long before shoe rationing restricted heel heights.

The medical group has been selling its cause via professional advice, lectures, and publications. Other groups (some fashion writers, shoemen, etc.) have also added their voice to the appeal for lower heels. These voices have been relentless and loud, and the response is substantial and growing fast.

The popularity of sports and sportswear in recent years has created an increased demand for sport shoes, which means lower heels. Slacks for women are competing with skirts, and shoes usually worn with slacks have lower heels.

Because of gas and tire rationing women are walking more. They don't walk and shop in high heels. Most importantly, millions of women are working in war industries, on farms and in military organizations. High heels are out of the question here. Many of these women will continue to fill these jobs after the war. There probably will be little yearning to return to the stilt-like heels of pre-war days. Women have learned that the low heel shoe can be stylish as well as comfortable.

Lasts: It is expected that women will comprise a large percentage of the workers in industry, business, and other fields. This means much greater popularity for the practical or conservative shoe. These lasts are primarily concerned with accurate conformity to the foot, with fit and comfort. Style is there but not sticking out like the "glamorous" platter-like lips of a Ubangi belle.

These lasts will be built for practicability, to serve both the business and semi-dress occasion. Women will be walking, standing, working more. Naturally they will be more conscious of their feet and shoes. Their more particular demands will be made upon the retailer first, who will pass the buck to the manufacturer and last maker, upon whose shoulders will rest the responsibility. There will be no passing the buck from there. These pressing demands will do much to reduce the evil practice of "doctoring up" lasts to save costs. Perhaps the time has now come, because of consumer pressure, when the last makers will be forced to devise more scientific precision methods to make truly foot-conforming lasts.

Styles: The frail, sophisticated dress or novelty shoe won't die. Woman will always be a style-minded creature. Nevertheless, in the post-war era she will be more practical-minded than vanity-minded.

What does this mean to shoe styles? It means that all clothing, including shoes, will tend toward the "sensible" or practical side. Perhaps the most popular of all shoes will be what we might call the "utility" shoe.

Sizes: The trend is definitely toward larger sizes, a fact noted by every retailer and manufacturer during the past 15 years. Many shoemen and foot doctors have attributed this to such factors as women being more active in sports, more sensible selection of sizes, etc. The answer is much simpler. It is merely that women's feet have grown larger. Young women of today are taller and heavier than their mothers were a generation ago. Taller and heavier women will naturally have longer and larger feet. The young women of today take larger sizes in all kinds of clothing, including shoes, than women did a generation ago.

The women's wearing apparel industry has met modern changes and requirements in sizes but the sizing conditions in the shoe industry have squatted in a rut.

The garment makers are now making women's clothes in accord with the new size standards established by a Government survey of body measurements taken on some 40,000 women. Manufacturers and retailers of women's wear have found these new standards to be of tremendous value in reducing complaints, returns, and resulting costs. Also, consumer satisfaction is definitely on the upgrade.

The shoe industry can make no

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such claim. It is in even direr need of new sizing standards to comply with the changes in foot sizes in the past generation. The shoe industry is still using size standards set up in the 1880s—60 odd years ago!

These standards, compared with today's needs, are grossly inaccurate. Nowadays a girl of 12 years will wear a size 6 or 7 shoe, whereas a generation ago she would have worn a 2 or 3. Also, it is well known that the same size in different lasts or shoes can be quite different. The 4B is sometimes equivalent to the 6A or 2C, depending upon the whimsy of the designer or last maker. Size variations are commonly inconsistent enough to warrant the serious attention of the entire industry. It is the consumers' major complaint against the industry. The problem can no longer be evaded. The industry can't possibly talk about scientifically accurate shoemaking or shoe fitting until the sizing dilemma is cleared.

Materials: After the war it is probable that leather will not dominate the shoe picture as in the past. The fast rising plastics industry is rapidly wedging its way into the shoe industry: plastics are being used for uppers, trimmings, heels, and other parts of the shoe. During the war, with leather rationing bound to tighten, plastics will get even more play. Moreover, industrial research is due for a tremendous jump after the war, and it is inevitable that various new materials will be found suitable for shoe use—not as substitutes for leather but as preferable replacements.

The trend of these changes is already in motion, and destined to pick up momentum after the war. It is apparent that most of these effects will be favorable.

Despite the conscientious efforts of manufacturers and retailers, their common headache is the loss from kickbacks or refunds caused by ill fitting or uncomfortable shoes. Usually, or frequently, this is not the fault of the shoe but the fault of the foot. The customer, however, will usually attribute her foot troubles to the shoe. For example, a pronated foot will cause a shoe to gape at the sides. The customer bewails the fact that she can't get a shoe to fit her foot. She blames the shoe and the shoeman.

But in the near future there will be much less foot trouble, and consequently less kick-backs on shoes. More conservative footwear, lower heels, greater foot-consciousness—these will sharply reduce foot troubles and consumer complaints about fit and comfort.

Mrs. and Miss Consumer will be wiser, more selective buyers. The industry will be forced to meet more particular consumer demands by establishing more scientific accuracy in last measurements, sizing, fitting technique, etc. In the end the industry will benefit materially through reduction in kick-back losses, and also through stronger consumer-industry good will.

The whole trend in recent years has been positively moving toward more conservative footwear for women. Count, for example, the hundreds of shoes whose trade mark signifies foot welfare. Not the orthopedic or corrective shoes, but the horde of shoes that play the middle line between foot welfare and style.

This trend has perhaps slipped the notice of many of us because it has moved slowly and unobtrusively. But it *has* moved and is gathering momentum faster. Rationing has abruptly brought it to our notice. The post-war utilitarian era will see these roots really sprout.

an interesting background. The material contains no rubber, no leather, and no plastics. It is a carpeting material treated with a special process and originally designed and tested for automobile tires. It was used as a cover for tires and tests showed that a thousand miles of driving failed to wear out even one tread of the material. It was proved that thousands of miles of hard driving were feasible.

The material has a rubbery feel and is exceedingly flexible and pliable. It can be worked in any way that leather or rubber soles can be worked, and it is being intensively promoted as a shoe soling material as well as for automobile mats and other products that were formerly made of rubber.

These new shoe soling materials are typical of scores of others that are being developed to solve the shoe industry's greatest immediate problem. They are the soles that will probably keep American feet protected for the duration, maintain American shoe style "morale," and they are, perhaps, harbingers of a new era of shoemaking that may follow the war.

appointed as chief of the leather and shoe branch of the *War Production Board*.

The *Office of Price Administration* recently announced that a shoe manufacturers' industry advisory committee is in the process of formation and that names of its members will be announced shortly.

Ohio

Altman Bros. Shoe Mfg. Co., Cincinnati, recently opened a branch fitting department in Covington, Ky.

Marshall H. Stevens, manager of Physical Culture shoes for the *Selby Shoe Co.*, Portsmouth, O., was recently appointed vice president of the company and also head of the war contracts division.

Michigan

Richard J. Schmidt, of Hillsdale, Mich., was recently re-elected president of the *Michigan Retail Shoe Dealers Assn.*

Wisconsin

Three officials of the *Frank Shoe Co.*, Milwaukee were recently found not guilty of fraud or bad faith in action on charges brought by the city of Kiel.

Missouri

Irving J. Brueggeman, sales manager of the St. Louis branch of the *Endicott-Johnson Corp.*, died March 11 after a short illness.

Edison Bros. Stores, Inc., women's shoe chain, recently moved from 710 N. 12th Boulevard, St. Louis, to 315 Washington Ave.

The *Patent Office* recently refused an application of *Spalsbury Steis Deevers Shoe Co.*, St. Louis, for the registration of "Active Service" as a trademark for shoes.

The *Tweedie Footwear Corp.*, Versailles, Mo., was recently awarded the Army-Navy "E" award for excellence in the production of shelter halves for the Army.

Canada

Charles Parsons, retired superintendent of the *United Shoe Machinery Corp.*, Montreal, died March 18 at his home in Westmount, Quebec.

Manufacturers Who Are Making Women's Work Shoes

THE following manufacturers of women's footwear are currently making models which are offered as meeting the requirements of women's work wear in factories, stores, restaurants, laundries, etc. The information about lines offered and retail price ranges (which are shown in parentheses) was obtained directly from each manufacturer.

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Additional information about any of these work shoes may be obtained direct from the manufacturers.

Sport and Walking Oxfords

Air-Kushin Shoes, Inc., Cincinnati, O. ($4.00).

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Air-Tred Shoes, Inc., Auburn, Me. ($5.95-$6.95).

Alberts Shoe Co., Middleboro, Mass. ($3.00-$5.00).

Allied Shoe Co., Elgin, Ill ($5.50-$6.50).

Altman Bros. Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).

D. Armstrong & Co., Rochester, N. Y. ($12.50 up).

Avon Shoe Co., Inc., Jersey City, N. J.

L. E. Beaudin Shoe Co., Hanover, Pa. ($2.98-$3.98).

Boyd-Welsh, Inc., St. Louis ($9.95; $10.95; $11.95).

Brown Shoe Co., St. Louis ($3.00-$6.00; $6.95).

California Shoes, Ltd., Los Angeles, Cal. ($5.95; $6.95; $7.95; $8.95).

Carlisle Shoe Co., Carlisle, Pa. ($8.95-$10.95).

Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).

Curtis-Stephens-Embry Co., Reading, Pa. ($5.00-$6.00).

Charles Cushman Co., Auburn, Me. ($2.50-$3.50).

Walker T. Dickerson Co., Columbus, O. ($9.50-$10.50).

Dixon-Bartlett Co., Baltimore, Md. ($8.95-$10.95).

Dodson-Fisher Co., Minneapolis, Minn. ($4.00-$5.00).

Gardiner Shoe Co., Gardiner, Me. ($4.00).

Irving Drew Corp., Lancaster, O. ($7.95-$8.95).

Freeport Shoe Co., Freeport, Me.

General Shoe Corp., Nashville, Tenn. ($4.00-$5.50).

Gerlach's, San Francisco, Cal. ($5.85-$10.85).

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Gilbert Shoe Co., Thiensville, Wis. ($7.00-$7.50).
Grossman's Shoes, Inc., Brooklyn, N. Y.
Holmes, Stickney & Walker, Inc., Portland, Me. ($5.00-$6.00).
Hubbard Shoe Co. Inc., Rochester, N. H. ($3.00-$3.45).
Huiskamp Bros. & Co., Keokuk, Ia. ($5.00-$7.00).
Huth & James Shoe Co., Milwaukee ($4.00; $5.00; $6.00).
International Shoe Co., St. Louis.
R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).
Irving Shoe Co., Chicago ($6.00).
James Shoe Mfg. Co., Milwaukee ($6.95).
Johansen Bros. Shoe Co., Inc., St. Louis ($7.95 up).
Joyce, Inc., Pasadena, Cal. ($6.50-$7.95).
Juvenile Shoe Corp., St. Louis, Mo. ($5.85-$6.85).
Kane, Dunham & Kraus, Inc., St. Louis ($6.00-$6.75).
Kopman Woracek Shoe Mfg. Co., Flat River, Mo. ($3.00-$4.00).
Krippendorf Dittman Co., Cincinnati, O. ($6.95-$7.95).
Laird, Schober & Co., Inc., Haverhill ($8.95-$10.50).
J. Mackey & Son, Jersey City, N. J. ($5.00 up).
Marshall, Meadows & Stewart, Inc., Auburn, N. Y. ($8.95-$12.75).
Medway Shoe Mfg. Corp., Medway, Mass. ($1.75-$2.00).
Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).
Milius Shoe Co., St. Louis ($5.00-$7.50).
P. W. Minor & Son, Inc., Batavia, N. Y. ($7.50).
Muskin Shoe Co., Baltimore, Md. ($3.00-$4.00).
O'Donnell Shoe Co., Humboldt, Tenn. ($6.00-$8.50).
Owens Shoe Co., Salem, Mass. ($4.00-$5.00).
Paramount Shoe Mfg. Co., St. Louis, Mo. ($6.95 up).
Schawe-Gerwin Co., Cincinnati, O. ($5.00).
Selby Shoe Co., Portsmouth, O. ($6.95-$12.95).
Simplex Shoe Mfg. Co., Milwaukee ($5.75-$6.95).
J. P. Smith Shoe Co., Chicago ($10.95-$12.95).
Sam Smith Shoe Corp., Newmarket, N. H. ($5.00).
Spalsbury Steis Deevers Shoe Co., St. Louis ($5.00-$6.00).
Stetson Shoe Co., S. Weymouth, Mass. ($10.95 up).
Tweedie Footwear Corp., Jefferson City, Mo. ($7.95).
Weyenberg Shoe Mfg. Co. (Hubbard Shoe Co. branch), Milwaukee ($4.00-$6.50).

Orthopedic and Comfort

Air-Kushin Shoes, Inc., Cincinnati, O. ($4.00).
Air-Tred Shoes, Inc., Auburn, Me. ($5.95-$6.95).
Altman Bros. Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.50).
D. Armstrong & Co., Rochester, N. Y. ($12.50 up).
Brown Shoe Co., St. Louis ($4.00-$8.00; $6.95).
Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).
Walker T. Dickerson Co., Columbus, O. ($9.50-$10.50).
Irving Drew Corp., Lancaster O. ($7.95-$8.95).
Fikany Shoe Corp., Rochester, N. Y. ($12.95).
Gerlach's, San Francisco, Cal. ($8.50-$15.00).
Grossman's Shoes, Inc., Brooklyn, N. Y.
Grossman Shoe Co., Inc., Parkersburg, W. Va. ($4.00-$5.00).
Holmes, Stickney & Walker, Inc., Portland, Me. ($5.00-$6.00).
Hubbard Shoe Co., Inc., Rochester N. H. ($3.00-$3.45).
Huiskamp Bros. & Co., Keokuk, Ia. ($5.00-$7.00).
International Shoe Co., St. Louis.
R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).
Irving Shoe Co., Chicago ($6.00).
Juvenile Shoe Corp., St. Louis ($6.00-$7.00).
L. V. Marks & Sons Co., Cincinnati, O. ($4.00-$5.00).
Marshall, Meadows & Stewart, Inc., Auburn, N. Y. ($8.95-$12.75).
Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).
P. W. Minor & Sons, Inc., Batavia, N. Y. ($9.00-$10.50).
National Shoe & Leather Co., Inc., Epping, N. H. ($2.50-$3.00).
O'Donnell Shoe Co., Humboldt, Tenn. ($7.50-$10.50).
Olympic Shoe Co., Lynn ($4.00-$6.00).
Selby Shoe Co., Portsmouth, O. ($6.95-$12.95).
Simplex Shoe Mfg. Co., Milwaukee ($6.50-$6.95).
Somerset Shoe Co., Skowhegan, Me.
P. Sullivan Shoe Co., Cincinnati, O. ($4.00-$5.00).
Tweedie Footwear Corp., Jefferson City, Mo. ($7.95).

Moccasins

Brown Shoe Co., St. Louis, Mo. ($3.00-$6.00).
California Shoes, Ltd. ($5.95-$7.95).
Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).
Curtis-Stephens-Embry Co., Reading, Pa. ($5.50).
Charles Cushman Co., Auburn, Me. ($2.25-$3.00).
L. B. Evans' Son Co., Wakefield, Mass.
Gilbert Shoe Co., Thienville, Wis. ($7.00-$7.50).
Hubbard Shoe Co., Inc., Rochester, N. H. ($3.00-$3.45).
Huiskamp Bros., Keokuk, Ia. (moccasin type welts) ($5.00-$7.00).
Huth & James Shoe Co., Milwaukee ($4.00; $5.00; $6.00).
International Shoe Co., St. Louis.
Kopman Woracek Shoe Mfg. Co., Flat River, Mo. ($3.00-$4.00).
J. Mackey & Son, Jersey City N. J. ($3.00 up).
Muskin Shoe Co., Baltimore, Md. ($3.00-$4.00).
Owens Shoe Co., Salem, Mass. ($4.00-$5.00).
Sawyer Moccasin Co., Bangor, Me. ($3.00-$4.00).
Viner Bros., Bangor, Me.

Boots

Gerlach's, San Francisco, Cal. ($12.85-$13.85).
Hubbard Shoe Co., Inc., Rochester, N. H. ($3.00-$3.45).
International Shoe Co., St. Louis.
R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).
J. Mackey & Son., Jersey City, N. J. ($6.00 up).
O'Donnell Shoe Co., Humboldt, Tenn. (jodhpurs) ($9.50-$12.50).

Nurses'

Air-Kushin Shoes, Inc., Cincinnati, O. ($4.00).
Air Tred Shoes, Inc., Auburn, Me. ($5.95-$6.95).
Alberts Shoe Co., Middleboro, Mass. ($3.00-$5.00).
Allied Shoe Co., Elgin, Ill. ($5.50-$6.50).
Altman Bros. Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).
D. Armstrong & Co., Rochester, N. Y.
Brown Shoe Co., St. Louis ($4.00-$6.95).
Craddock-Terry Co., Lynchburg, Va. ($4.00-$6.00).
Curtis-Stephens-Embry Co., Reading, Pa. ($5.50-$6.00).
Charles Cushman Co., Auburn, Me. ($3.00).
Walker T. Dickerson Co., Columbus, O. ($9.50-$10.50).
Dodson-Fisher Co., Minneapolis, Minn. ($4.00-$5.00).
Gardiner Shoe Co., Gardiner, Me. ($4.00).
Irving Drew Co., Lancaster, O. ($7.95-$8.95).
Fikany Shoe Corp., Rochester, N. Y. ($12.95).
Gerlach's, San Francisco, Cal. ($8.50-$12.85).
Gilbert Shoe Co., Thiensville, Wis. ($7.00-$7.50).
Grossman's Shoes, Inc., Brooklyn, N. Y.
Grossman Shoe Co., Inc., Parkersburg, W. Va. ($4.00-$5.00).
Holmes, Stickney & Walker, Inc., Portland Me. ($5.00-$6.00).
Hubbard Shoe Co., Inc., Rochester, N. H. ($3.00-$3.45).
Huiskamp Bros., Keokuk, Ia. ($5.00-$7.00).
Huth & James Shoe Co., Milwaukee ($5.00-$6.00).
International Shoe So., St. Louis.
R. B. Ireland Shoe Co., Dover, N. H. ($2.50-$3.00).
Irving Shoe Co., Chicago.
Johansen Bros. Shoe Co., Inc., St. Louis ($7.95 up).
Kopman Woracek Shoe Mfg. Co., Flat River, Mo. ($3.00-$4.00).
Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).
P. W. Minor & Son, Inc., Batavia, N. Y. ($8.50-$10.50).
National Shoe & Leather Co., Inc., Epping, N. H. ($2.50-$3.00).
O'Donnell Shoe Co., Humboldt, Tenn. ($6.95-$10.00).
Olympic Shoe Co., Lynn ($4.00-$6.00).
Owens Shoe Co., Salem, Mass. ($4.00-$5.00).
Selby Shoe Co., Portsmouth, O. ($6.95-$10.95).
Simplex Shoe Mfg. Co., Milwaukee ($5.75-$6.95).
Sam Smith Shoe Corp., Newmarket, N. H. ($5.00).
Somerset Shoe Co., Skowhegan, Me.
Spalsbury Steis Deevers Shoe Co., St. Louis ($5.00).
P. Sullivan Shoe Co., Cincinnati, O. ($4.00-$5.00).
Weyenberg Shoe Mfg. Co. (Hubbard Shoe Co. branch), Milwaukee ($5.00).

Special Work Shoes

Air Tred Shoes, Inc., Auburn, Me. ($5.95-$6.95).
D. Armstrong & Co., Rochester, N. Y. ($12.50 up).
Curtis-Stephens-Embry Co., Reading, Pa. (wood soled) ($6.50).
Gerlach's, San Francisco, Cal. (welders' boots) ($13.85).
Johansen Bros. Shoe Co., Inc., St. Louis ($7.95 up).

Sam Smith Shoe Corp, Newmarket, N. ~~H.~~ (semi-safety) ($5.00).

Spalsbury Steis Deevers Shoe Co., St. Louis (protective toes) ($5.00-$6.00).

F. J. Stahmer Shoe Co., Davenport, Ia. (wood soled) ($2.50-$3.50).

Safety Shoes

Brown Shoe Co., St. Louis ($5.00).

Craddock-Terry Co., Lynchburg., Va. ($4.00-$6.00).

Charles Cushman Co., Auburn, Me. (steel toes) ($4.00-$5.00).

Hubbard Shoe Co., Inc., Rochester, N. H. ($5.00).

International Shoe Co., St. Louis.

James Shoe Mfg. Co., Milwaukee ($6.95).

Charles Meis Shoe Mfg. Co., Cincinnati, O. ($5.00-$6.00).

Muskin Shoe Co., Baltimore, Md. ($4.00).

O'Donnell Shoe Co., Humboldt, Tenn. (conductive) ($7.50-$10.50).

Schawe-Gerwin Co., Cincinnati, O. ($5.00).

Simplex Shoe Mfg. Co., Milwaukee ($6.95-$7.50).

Spalsbury Steis Deevers Shoe Co., St. Louis ($6.00).

Note—The Gold Seal Shoe Co., Boston, manufactures sport and walking oxfords, orthopedic and comfort shoes, moccasins, and nurses' shoes suitable for inclusion in the above lists. However, these are for distribution only through A. S. Beck stores and are not available to other retailers.

Women Are Being "Conditioned" For Conservative Post-War Shoes

By William A. Rossi

THOSE who think that pre-war and post-war conditions in the women's shoe industry will be the same may be in for a few "hot-foot" surprises.

It is probable that present restrictions on heel heights and styles is not altogether a war emergency. It is the sounding note of the new trend in women's footwear and consumer demands for the post-war era. Mrs. and Miss Consumer are slowly but surely being "conditioned" to more conservative footwear. Thousands of more pairs of durable wartime shoes are being made for civilians, although the total number of shoes made will be 100,000,000 pairs less than in 1942. Emphasis is on the practical.

One prominent New York women's shoe retailer said, shortly after shoe rationing went into effect, "We're carrying up to 50 per cent in "sensible" shoes now as compared with only five per cent stocked before rationing. After the war I don't think we'll be able to get along without at least 30 per cent of our stock being on the conservative models."

No, the stylish and novelty shoes aren't doomed and never will be as long as woman is woman. But they'll probably not see the lush, flourishing days of old. The conservative models are in for the real boom, now and after the war. There are substantial reasons for believing that the trend is strongly in this direction.

The changes will be chiefly with heel heights, size ranges, last de-

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HOWES BROS. CO.
SOLE LEATHER
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AT ITS BEST
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signs, styles, and materials. Not temporary wartime changes, mind you, but a definite move toward new conditions.

Now set this fact indelibly in your mind: the keynote of the post-war world is expressed in one word, *utilitarian.* It is no longer a man-dominated world. Women in industry, in business, in military organizations. No longer the lady of leisure or the household drudge. It's the *practical* woman.

This means tremendous influence on women's clothing is in the making. All clothing, including shoes, will be patterned and constructed to express utility and practicability. The transitional today is merely the bridge between the frilly yesterday and the utilitarian tomorrow in footwear.

All right, what and why will these changes be in women's footwear?

Heel Heights: Rationing has fixed these to a 21/8 limit. There is a good possibility that this height limit may continue after the war. During the last dozen years women have become low heel conscious. This has been due to "conditioning" by various influential sources. Physicians, foot doctors, and other professional groups have been strongly selling the women the low heel habit. These groups are authoritative enough to carry convincing weight. The pressure of their arguments had begun to take noticeable effect long before shoe rationing restricted heel heights.

The medical group has been selling its cause via professional advice, lectures, and publications. Other groups (some fashion writers, shoemen, etc.) have also added their voice to the appeal for lower heels. These voices have been relentless and loud, and the response is substantial and growing fast.

The popularity of sports and sportswear in recent years has created an increased demand for sport shoes, which means lower heels. Slacks for women are competing with skirts, and shoes usually worn with slacks have lower heels.

Because of gas and tire rationing women are walking more. They don't walk and shop in high heels. Most importantly, millions of women are working in war industries, on farms and in military organizations. High heels are out of the question here. Many of these women will continue to fill these jobs after the war. There probably will be little yearning to return to the stilt-like heels of pre-war days. Women have learned that the low heel shoe can be stylish as well as comfortable.

Lasts: It is expected that women will comprise a large percentage of the workers in industry, business, and other fields. This means much greater popularity for the practical or conservative shoe. These lasts are primarily concerned with accurate conformity to the foot, with fit and comfort. Style is there but not sticking out like the "glamorous" platter-like lips of a Ubangi belle.

These lasts will be built for practicability, to serve both the business and semi-dress occasion. Women will be walking, standing, working more. Naturally they will be more conscious of their feet and shoes. Their more particular demands will be made upon the retailer first, who will pass the buck to the manufacturer and last maker, upon whose shoulders will rest the responsibility. There will be no passing the buck from there. These pressing demands will do much to reduce the evil practice of "doctoring up" lasts to save costs. Perhaps the time has now come, because of consumer pressure, when the last makers will be forced to devise more scientific precision methods to make truly foot-conforming lasts.

Styles: The frail, sophisticated dress or novelty shoe won't die. Woman will always be a style-minded creature. Nevertheless, in the post-war era she will be more practical-minded than vanity-minded.

What does this mean to shoe styles? It means that all clothing, including shoes, will tend toward the "sensible" or practical side. Perhaps the most popular of all shoes will be what we might call the "utility" shoe.

Sizes: The trend is definitely toward larger sizes, a fact noted by every retailer and manufacturer during the past 15 years. Many shoemen and foot doctors have attributed this to such factors as women being more active in sports, more sensible selection of sizes, etc. The answer is much simpler. It is merely that women's feet have grown larger. Young women of today are taller and heavier than their mothers were a generation ago. Taller and heavier women will naturally have longer and larger feet. The young women of today take larger sizes in all kinds of clothing, including shoes, than women did a generation ago.

The women's wearing apparel industry has met modern changes and requirements in sizes but the sizing conditions in the shoe industry have squatted in a rut.

The garment makers are now making women's clothes in accord with the new size standards established by a Government survey of body measurements taken on some 40,000 women. Manufacturers and retailers of women's wear have found these new standards to be of tremendous value in reducing complaints, returns, and resulting costs. Also, consumer satisfaction is definitely on the upgrade.

The shoe industry can make no

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SHOE FACTORY

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Safety First in Women's Work Shoes

WOMEN'S work shoes, to be worthy of the name, must first of all provide safety for the wearer. All of the other principal requisites of good work shoes for women — comfort, durability, good design, good construction, etc. — are akin to and contribute to the safety factor. A shoe that is not comfortable, durable, and well made will not be a safe shoe.

The need for women's work shoes that will provide maximum safety is obvious. Open toes and backs, high heels, flimsy materials, shoddy construction all endanger the foot and bodily safety of the wearer. Injured feet can almost always be prevented by the wearing of proper, safe shoes. Bodily injury can often be prevented by the same precaution. Foot and body fatigue is commonly traceable to the wearing of improper work shoes, and any women's work shoe that does not provide safety is not a suitable shoe for work wear. Exploitation of flimsy playshoes for work wear should be stopped. Exploitation of such types for wear at work in war industries where foot hazards are greater than normal is nothing short of criminal.

The specifications of a safe work shoe for women cannot be summed up in a single code. The shoe that is entirely safe and satisfactory for one occupational condition is dangerous for another. Occupational conditions must be studied carefully when recommending any work shoe for women.

In general, safety engineers agree that safe footwear is as important for women workers as are some of the tools the workers employ. Open toed shoes are the bane of safety engineers in practically every war plant. Lieut. Marshall P. Bearce, safety officer at the Springfield, Mass., Armory, said recently that the wearing of open toed shoes by women shop or office workers at the plant was dangerous and that steel slivers may be picked up by the feet very quickly with that type of shoe. He observed that the kind of shoe that seems to meet all requirements and satisfies the women wearer as to appearance is a low heeled moccasin type of sturdy leather which will not become impregnated with oil too quickly. Because of oil on floors some of the women workers have to replace their shoes when they become oil soaked rather than worn out; hence the experimenting with wooden soles.

Another Springfield safety engineer who condemned open shoes for war workers is Paul Rosseau, safety engineer for the Westinghouse Co. plant. The plant employs several thousand women and Mr. Rosseau is strongly in favor of the safety toe for workers' shoes. He said the safety toe shoe which permits the leather around the toe cap to be cut and the cap pulled away in case of accident is of special value.

Mr. Rosseau also stressed the importance of strong arch supports in women's work shoes, because many of the women are standing up all day and their feet need as much support as can be given to them.

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Women workers recognize the need for safety in their footwear, and an analysis of HIDE AND LEATHER AND SHOES' consumer survey among thousands of women workers (H&L&S, Sept. 5) reveals that comfort was specified in 86.1 per cent of the replies received; safety in 54.3 per cent; durability in 66.6 per cent; and style in only 38.9 per cent. As comcomfort, safety, and durability on work footwear are closely akin, it is clear that the great majority of women workers want to work in safe footwear.

Tenth of a series by

Alfred Henderson

Reporting HIDE and LEATHER AND SHOES' study of women's work shoes

Interest in safety factors is still further exemplified in numerous letters received by HIDE AND LEATHER AND SHOES from women's groups and Government agencies. Some of these letters have been printed in connection with earlier articles in this series and others are printed in this issue. They all express interest in better work shoes for women, and understandably so because of the swelling totals of women employed directly in war industries.

A few weeks ago Paul V. McNutt, chairman of the War Manpower Commission, said that four million women are now working in war plants out of a total labor force of 17,500,000, and that to meet 1943 production goals the number of women must in-

This streamlined oxford by Dixon-Bartlett Co. is a popular model with the WAVES, who buy their own shoes at regular retail stores, and also with some women workers who want a smart shoe combining comfort and style features.

crease until by the end of the year they will be filling almost 30 per cent of all war production jobs. "By that time it is expected that six million women will be in war work," Mr. McNutt said.

At the same time, women will play an even greater role, numerically and proportionately, in the essential civilian trades and services which are necessary to maintain the wartime economy, Mr. McNutt continued, stating that this trend will increase until by the end of the year as many as 45 per cent of the workers in these home front jobs will be women.

Last September the makers of electrical machinery reported 36 per cent of their workers were women, and other war industries reported equally interesting percentages of women workers. Forty-eight per cent of workers making communications equipment were women; scientific and technical instruments, 34 per cent; electrical equipment, 27 per cent; small arms ammunition, 35 per cent; other ammunition, 28 per cent; chemicals and allied industries, 23 per cent; rubber products, 33 per cent; and firearms, 22 per cent.

Every one of these jobs is vital to the war effort, and women working in these industries, while frequently they are not confronted with unusual occupational hazards, must nevertheless have proper foot protection.

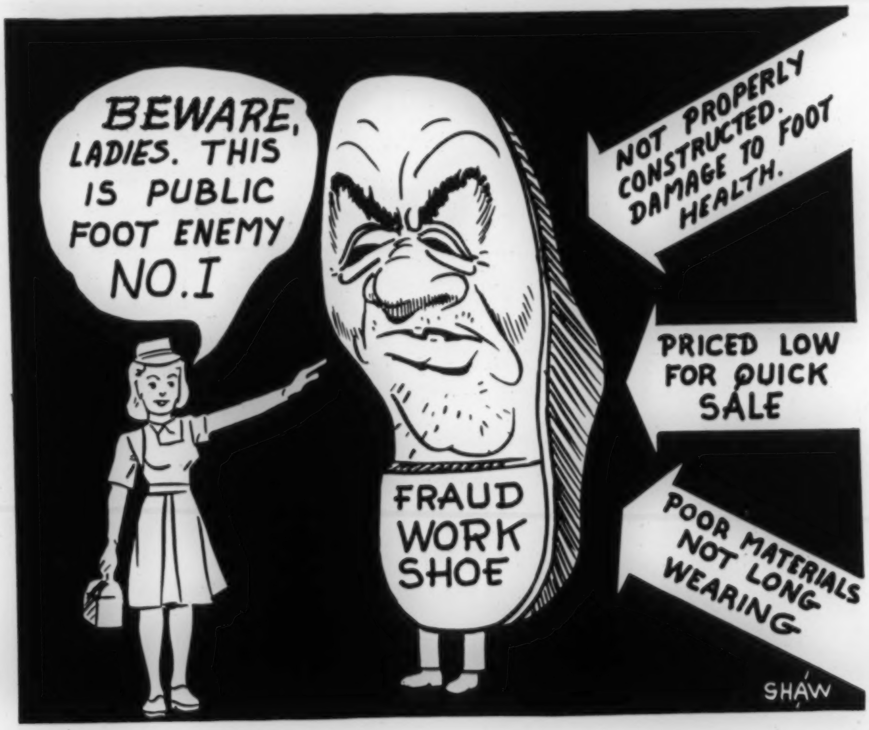
In heavy industries, such as ordnance, where foot hazards are above normal, 19 per cent of the workers today are women. In the manufacture of guns over 60 calibre, and in the making of tanks, both of which involve heavy metal work, the proportion of women workers is nine and seven per cent respectively. In the iron and steel industry, nine per cent of the labor force is made up of women. In shipbuilding—traditionally an all-male occupation, there has been an influx of women workers in recent months, particularly in the Government Navy Yards. At present only about three per cent of the workers in the shipbuilding industry are women, but this is expected to rise rapidly in the next few months.

The Patrol Oxford by Dixon-Bartlett is designed for wear by women engaged in war service activities.

Although this model by Dixon-Bartlett is not suitable for many forms of work wear, it is a comfortable type that has proved popular with women doing bench work where foot support and protection provided by high oxfords and safety box toes is not essential. The shoe is a sturdy Goodyear welt with plenty of toe room.

At an Army proving ground an 18 year old girl operates a 15 ton crane and an all-woman crew fires and cleans a 90 m.m. and anti-aircraft gun. More than a thousand women are replacing men here in testing all types of war material—tanks, machine guns, trucks, and aircraft cannon. Women are employed in mines as ore sorters, machine greasers and cleaners, aerial team operators, and sledgers; in steel mills as operators of giant overhead travelling cranes; on railroads as engine oilers and wipers, turn table operators, and hostlers' helpers; as sawmill operators; as gunners in ordnance factories, and in all sorts of similar work.

The accomplishments of "the woman who works" have broadened since she was described in the first article of this series (H&L&S, June 13, 1942). She is doing a great job for American war industries. But the constant menace that is present

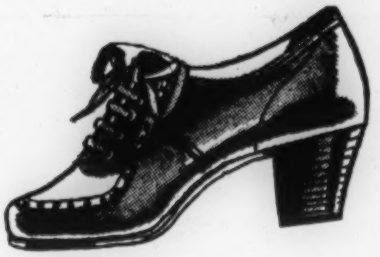

BEWARE, LADIES. THIS IS PUBLIC FOOT ENEMY NO. I
NOT PROPERLY CONSTRUCTED. DAMAGE TO FOOT HEALTH.
PRICED LOW FOR QUICK SALE
FRAUD WORK SHOE
POOR MATERIALS NOT LONG WEARING
SHAW

Interested in Heavy Duty Shoes

Typical of the interest in this series which has been expressed by leaders of farm women is the following letter from Gladys H. Adams, extension specialist in clothing, Cooperative Extension Work in Agriculture and Home Economics, State of Iowa:

"I am interested in knowing about work that has been done in regard to women's work shoes. I am a clothing specialist at Iowa State College and work with the 4-H Club girls and their leaders. These would be rural girls and women who need shoes for heavy outside work."

Shoes Now Favored By Women Workers



Pictured on this page are common types of shoes which have been widely accepted by women working under conditions where foot comfort, health, and support are essential, but where occupational conditions do not require special protective footwear.

Upper left: The Broadway Store, Los Angeles, offers this smart oxford with leather heel and roomy toe in black or brown calf, priced at $8.95.

Middle left: O'Connor & Goldberg, Chicago, is showing this pump with attractive moccasin forepart in antique tan calf, priced at $3.98.

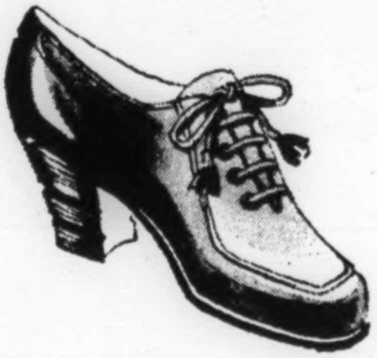
Lower left: This suede trimmed calf oxford offers good support for the foot and plenty of toe room. Priced by O'Connor & Goldberg, Chicago, at $3.98.

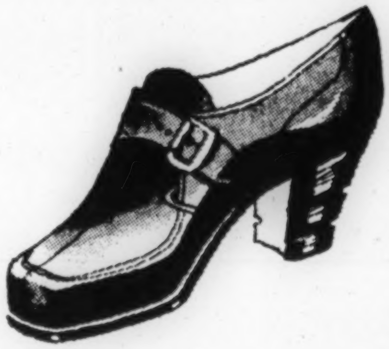
Upper right: Hudson's, Detroit, is showing this rust tan oxford with perforation detail, priced at $6.75.

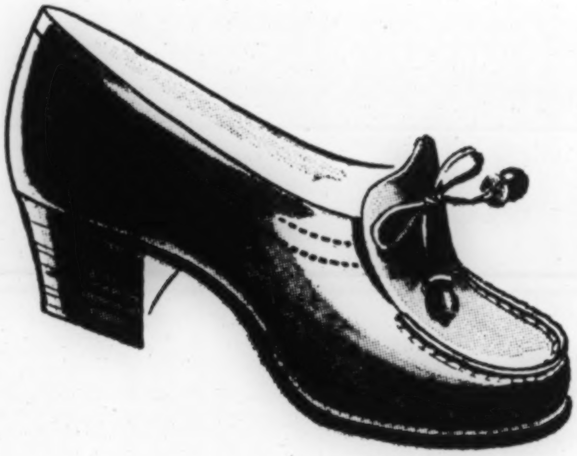
Second right: A popular brown calf monk with instep strap and buckle, shown by The Broadway Store, Los Angeles, at $8.95.

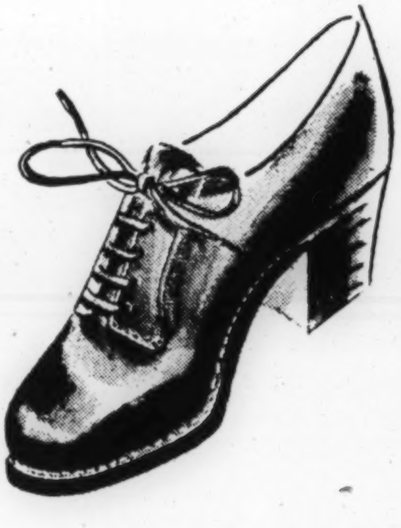
Third right: Sommer & Kaufman, San Francisco, offers this five eyelet oxford with comfortable seamless toe at $9.95.

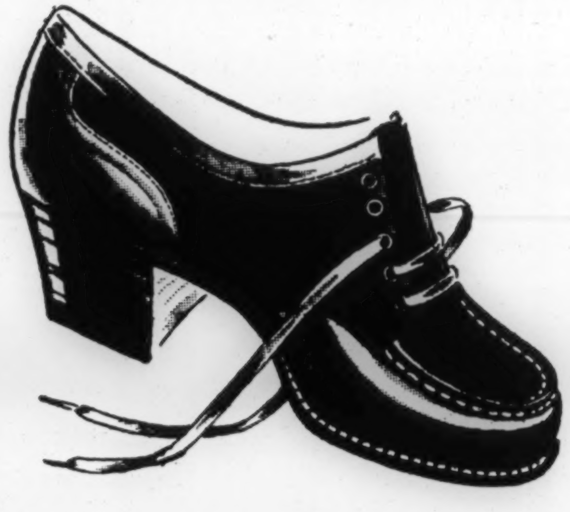
Lower right: A popular moccasin style shoe of soft leather offered at $5.95 by A. Harris & Co., Dallas, Tex.

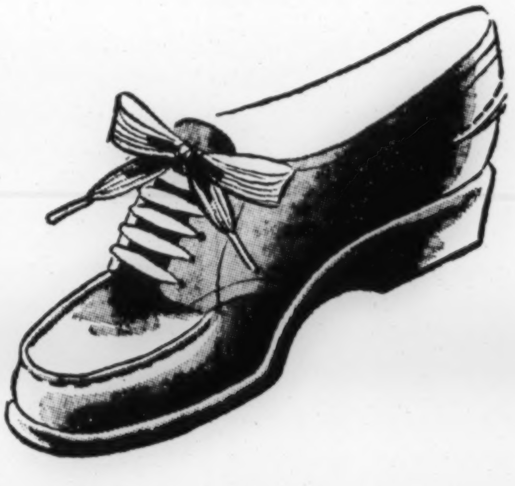












All Drawings courtesy
National Research Bureau, Inc.
Chicago and New York

when she is shod in improper and unsafe footwear is appalling. Many of these women have never before done industrial work and they are surrounded by hazards which are entirely new and unfamiliar to them. Many others are engaged in occupations with which they are not familiar, and many of the war occupations are unusually hazardous.

These things add up to a safety problem that is terrific, and one which suitable footwear would do much to solve.

Wants Shoes for Shipyard Workers

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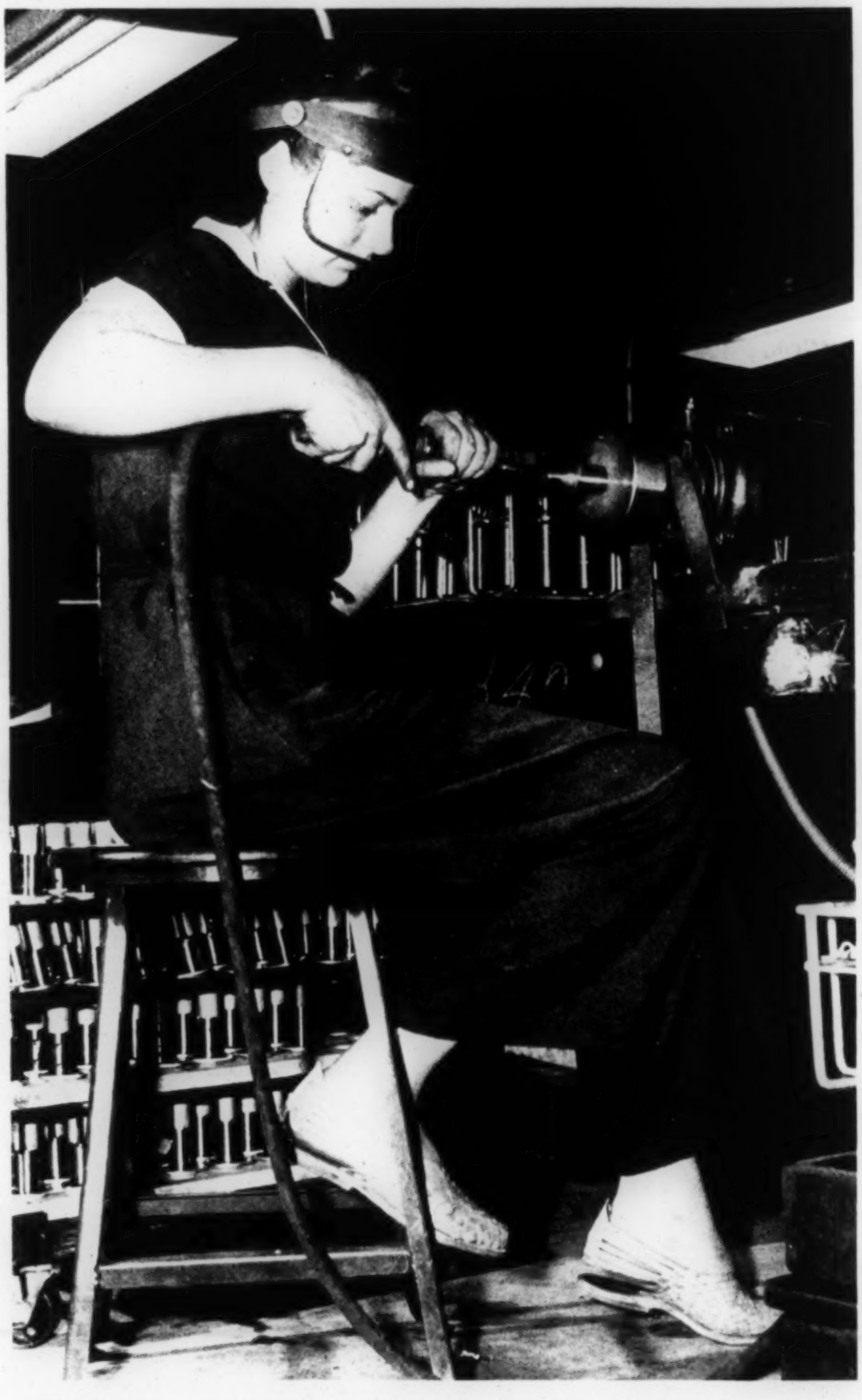
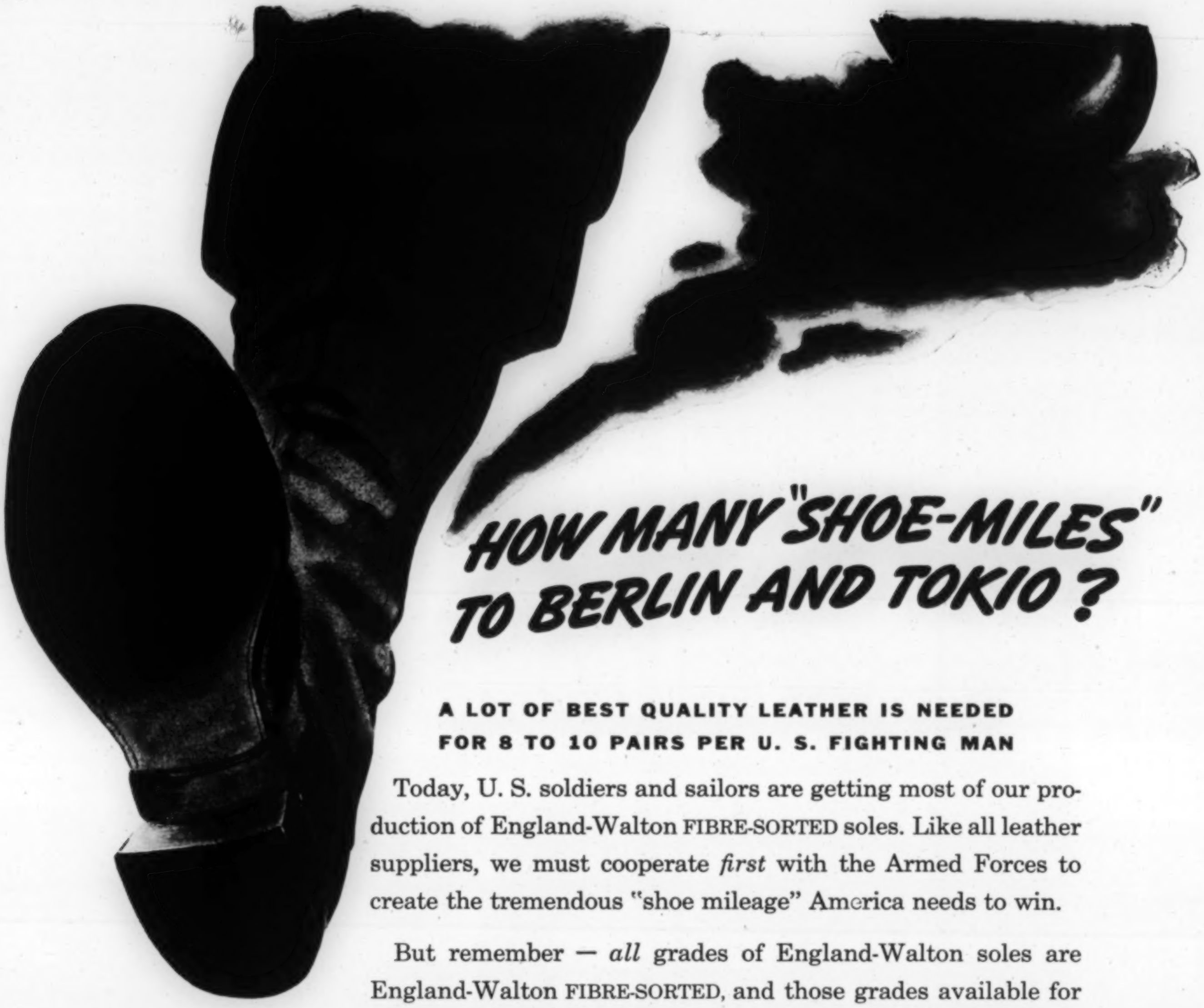
What has been done to provide proper shoes for these women—the women who in the past have constituted a large and undeveloped potential market for work shoes, and who will be needing work shoes long after this war is over?

A year ago very little was being done for these women. There was no classification of women's work shoes. As a subject for trade discussion the women's work shoe was taboo. Reasonably suitable types for work wear were not clearly identified for consumers. Trade promotion was wrapped around style and glamour. And employed women as a whole constituted, during their working hours,



This picture of an essential war worker whose feet are shod in flimsy huaraches that invite foot crippling and body injury, is a graphic portrayal of the great need for suitable work shoes for women. With no previous industrial experience this girl mastered the operation of this compressed air machine in record time, and is now polishing airplane motor parts with speed and skill. Her skill is too valuable to be lost even temporarily, and her employer should have watched the shoes she is wearing as well as the parts she is polishing.

Official OWI Photo by Ann Rosener



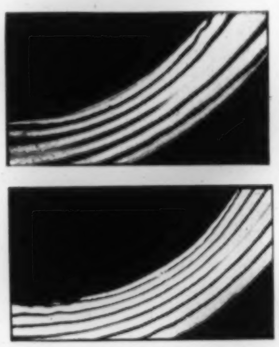
HOW MANY "SHOE-MILES" TO BERLIN AND TOKIO?

A LOT OF BEST QUALITY LEATHER IS NEEDED FOR 8 TO 10 PAIRS PER U. S. FIGHTING MAN

Today, U. S. soldiers and sailors are getting most of our production of England-Walton FIBRE-SORTED soles. Like all leather suppliers, we must cooperate *first* with the Armed Forces to create the tremendous "shoe mileage" America needs to win.

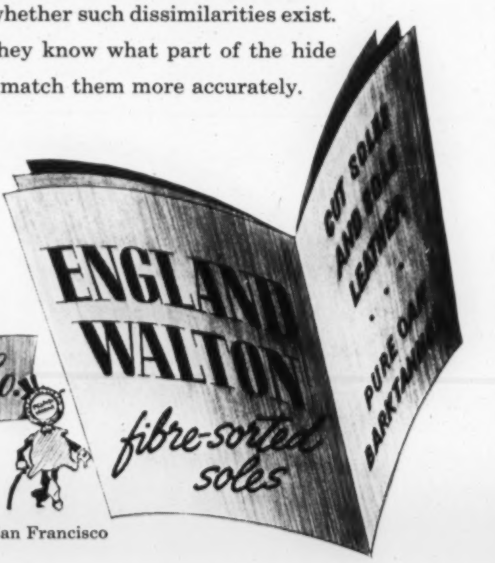
But remember — *all* grades of England-Walton soles are England-Walton FIBRE-SORTED, and those grades available for civilian use still give you fibre-sorting's proven benefits of more even flexibility and wear.

THE CAMERA'S EYE REVEALS SECRET OF EXPERT FIBRE-SORTING



These pictures, taken with polarized light, show how the strain-lines vary in unmatched soles. Experienced E-W fibre-sorters, with knowledge of leather's internal structure, can tell at a glance whether such dissimilarities exist. After long years of this exacting work, they know what part of the hide each sole came from, and thus are able to match them more accurately.

When the war is over, their EXTRA skill will again be available in E-W's best selections to give Manufacturers and Retailers the EXTRA sales point that E-W Fibre-Sorting provides.



England Walton Division

A. C. Lawrence Leather Co.

Boston, Camden, Peabody, New York, St. Louis, Columbus, Milwaukee, Los Angeles, San Francisco
Ashland, Ky., Newport, Tenn., Hazelwood, N. C.

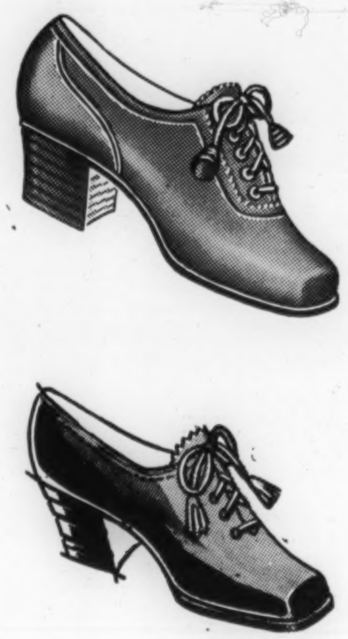
the poorest and most unsatisfactorily shod group of women in the country.

There have been many gains made in the past year in this respect. These can be summarized somewhat as follows:

1. Most important gain has been that of shattering the ancient prejudice against the term "women's work shoe." A year ago it was almost sacrilege to speak of women's work shoes as such. Today that is not true. Many shoemen still prefer to talk about "service shoes," "duty shoes," "occupational shoes," etc., but they will admit that what they are describing is the shoe that they believe represents a work shoe. The importance of this gain cannot be underestimated.

2. Definite standards are being developed for protective work shoes. These standards will insure the development of properly protective footwear for the women who need it.

3. Specially designed work shoes, made along the lines of sports oxfords, walking shoes, health shoes, etc., have been partially developed. These shoes retain the satisfactory features of their basic types and include additional features of special interest for work wear.



Two models by Dixon-Bartlett Co. which are designed for wear by WAVES, war service workers, and workers in occupations where no unusual foot hazards are present and where the type of work does not call for special work footwear.

4. Manufacturers and retailers who are making shoes suitable for work wear are emphasizing this fact in their promotion and advertising. This means that consumers are finding it easier to locate and identify the shoes they need for work wear.

5. Many retailers, some with the encouragement of their suppliers, are studying the work shoe needs of their feminine customers and are stocking and advertising shoes that will serve those needs.

All of these gains are important because they inspire a hope that the day is coming when women's shoes that are suitable for work wear will be classified as work shoes and so distinguished from the dress types. They indicate that manufacturers will give more attention to work shoes in the future than they have in the past. They indicate that working women will find it easier to locate suitable and identifiable work shoes.

These gains are not enough. Furthermore, they are being confused, and could be nullified, by the clamor of some manufacturers to get on the band wagon of the work shoe demand whether or not they have suitable footwear to offer. The flimsiest types of huaraches and playshoes are being offered as work shoes without an apology. Recommending such footwear for any form of ordinary shop or commercial work is misleading; promoting it for war work and other occupations where many foot hazards exist is nothing short of criminal.

The promotion for work wear of common sport oxfords, walking shoes, orthopedic shoes, and similar types is widespread. These shoes have many points to recommend them as work shoes, but most of them should be better developed with more attention to work wear needs and less attention to trying to develop an all purpose shoe. They are filling in the gap between no suitable work footwear and work footwear promotion and that day to come when women's work shoes will come into their own as a definite classification of women's footwear.

The scoffers who still feel that women's work shoes have few possibilities, who still believe that all purpose shoes—or worse—will fill the need, should be reminded of the easily made and highly profitable nurses' shoe. Based upon the lines and specifications of common walking and health type shoes, the nurses' shoes "went to town" when they were given some added features to make them attractive to nurses, and when they were identified with their purpose by the simple expedient of calling them by their right name.

I'M HERE FOR THE DURATION AND POST-WAR PERIOD.
48
47
46
1945
1944
1943
LADIES WORK SHOE
1942
SHAW

The concluding article in this series will be published in the Apr. 3 issue and will describe the types of shoes now being offered for work wear by leading women's shoe manufacturers. A complete summary of the findings of "Hide and Leather and Shoes'" study of women's work shoes will be prepared and published soon after the conclusion of this series.

The case of the missing box toe heater

Neither Scotland Yard nor the Crime Club can solve it. Frankly, we're baffled. Read the evidence. If possible, find the motive and work out the solution.

GONE! Yet our records list it on loan and in use. Not to be found in lasting room, stock room, or cellar — gone into thin air! Last seen two months ago, wearing a copper overcoat, in the company of Old Man Hindsight, as vicious a villian as ever trod the boards in an Op'ry House meller-drammer.

Seriously, its loss is important. Not one, but hundreds of irreplaceable box toe heaters made from critical copper, stainless steel, brass, and cast iron have been lost by careless handling — usually through putting off their return until tomorrow as today seems short of minutes. We cannot make *new* box toe equipment for the duration. Our 1943 complement is being served to Messrs. Hirohito & Co. as part of an indigestible metal diet, and though our stocks are complete, we no longer have an abundant supply of heaters to cover needless shortages.

BUY BONDS FOR BLOCK BUSTERS

Box toe heaters are as important to you as they are to us. Don't lose them. Don't store them. When replaced for any reason, return them *at once.* Take care of them by following a few simple rules and add months to their span of efficient usefulness.

DON'TS for box toe heaters. (Please pass on to lasting room foreman.)

Don't operate electric heaters at voltages in excess of the unit resistance marked on each heater.

Don't operate heaters without water in boilers.

Don't carry water supply cans by the spout — use handle.

Don't fail to clean gas burners every six months.

Don't order units, water cans, and other supplies in excess of the amount actually needed.

Don't retain heaters not needed on the line.

Don't stock them "for the time being." Send them back.

BECKWITH MANUFACTURING CO., DOVER, N. H.

BECKWITH
BOX TOES

VICTORY ARMY E NAVY PLASTICS

Approved Specifications For Women's Safety Shoes

The first war standard specifications for women's safety shoes, and the first in a series of such standards now being developed, has just been released by the American Standards Assn. in a comprehensive booklet.*

The development of the safety shoe standards was undertaken by the ASA in response to requests received from the War Production Board and the Office of Price Administration, which had indicated that it was necessary to provide protection to the wearer and to conserve critical materials during the war effort.

The committee in charge of the work included Maj. E. R. Granniss, C.M.P., chief, Accident Prevention Section, Office of the Provost Marshal General, War Department (Capt. E. V. Parker, C.M.P., alternate); George Dick, Melville Shoe Corp. (L. A. Tremblay, alternate; W. E. Emley, National Bureau of Standards (S. J. Owen, Jr., alternate); R. C. Erb, J. F. McElwain Co. (A. C. Blunt, Jr., alternate); J. H. Gimblett, International Shoe Co.; H. J. Griffith, Jones & Laughlin Steel Co.; E. B. Landry, Shore Establishments Division, Navy Department (H. G. Desjardins, alternate; H. L. Miner, E. I. duPont de Nemours & Co.; Maj. W. J. Niederauer, O. D., Safety and Security Branch, Office of the Chief of Ordnance, War Department (W. M. Wiesenberg, alternate); G. E. Sanford, General Electric Co.; T. F. Whalen, National Conservation Bureau; A. A. Williams, Safety First Shoe Co.

The Government agencies were represented in a liaison capacity by M. L. Chandross, H. C. Mesch, A. J. Truelson, A. J. Spring, and H. L. Johnson. H. M. Lawrence of the ASA staff served as secretary for the committee.

The specifications themselves are divided into five sections which cover the scope and purpose of the standards, general requirements, material and workmanship, safety toe box, and identification. An appendix, which is not a part of the standard specifications, contains suggestions on the selection, care, and repair of safety shoes.

These standard specifications would be important to the shoe industry and consumers if only for the fact that they are the first detailed specifications of the kind prepared by any agency for general use. Its importance, however, extends far beyond this point.

The specifications will meet with general approval, although there will be some in the trade who may feel that some of the details are too inflexible for practical purposes. However, it should be remembered that the specifications cover a type of shoe for which rigid standards are necessary if the protection implied in their name is to be actually provided.

Not only are all of the materials to be used in the shoes specified in detail, as well as the construction requirements, but standards are also set for testing the safety toe boxes.

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*"American War Standard Specifications for Protective Occupational Footwear; Women's Safety Toe Oxford Shoes. Approved Feb. 12, 1943." American Standards Assn., 29 W. 39th St., New York; 25 cents.

★ ★ ★ ★ Surpass Kid ★ ★ ★ ★

SURPASS

UNIFORMITY,
DEPENDABILITY,
AND QUALITY
MAKE
FINE SHOEMAKING FINER

★

SURPASS LEATHER COMPANY
PHILADELPHIA, PENNSYLVANIA, U. S. A.

HOWES BROS. CO.
SOLE LEATHER
Howes
AT ITS BEST
TANNERS CUT SOLE CO

when she is shod in improper and unsafe footwear is appalling. Many of these women have never before done industrial work and they are surrounded by hazards which are entirely new and unfamiliar to them. Many others are engaged in occupations with which they are not familiar, and many of the war occupations are unusually hazardous.

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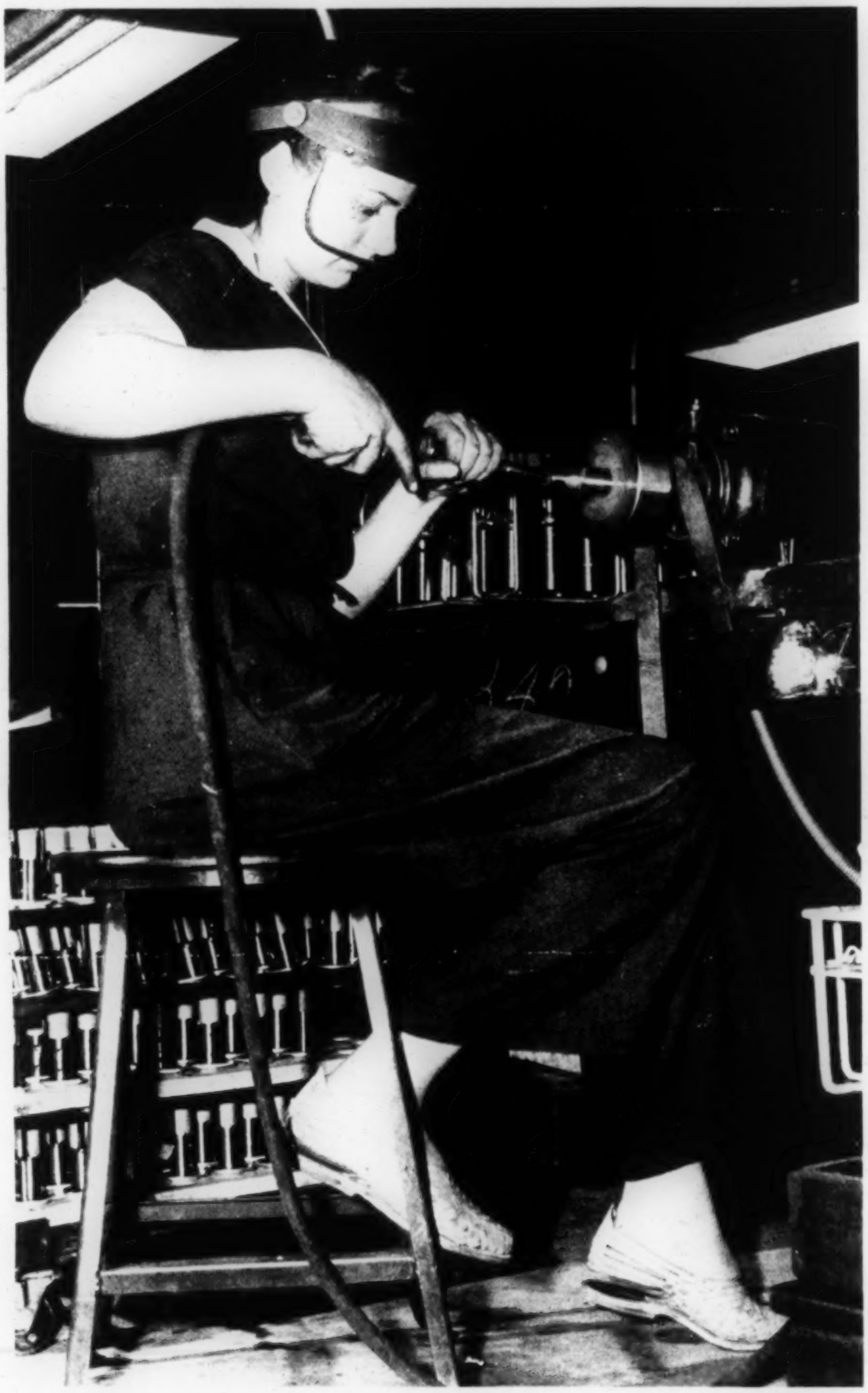

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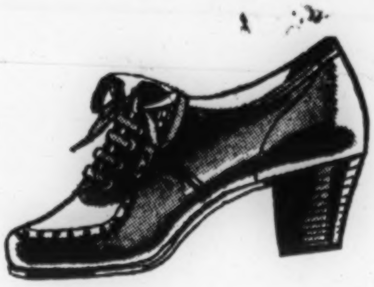
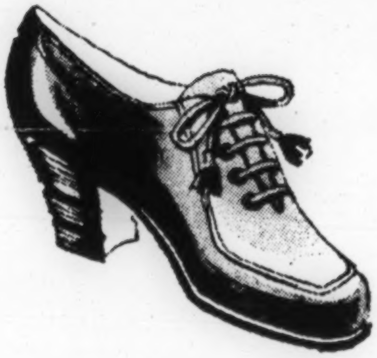
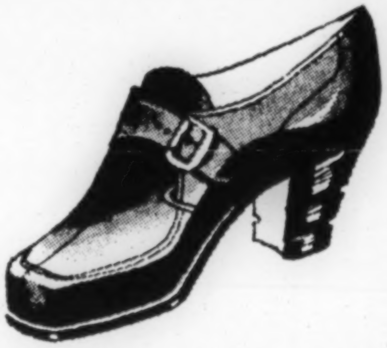
Official OWI Photo by Ann Rosener

Shoes Now Favored By Women Workers







Pictured on this page are common types of shoes which have been widely accepted by women working under conditions where foot comfort, health, and support are essential, but where occupational conditions do not require special protective footwear.

Upper left: The Broadway Store, Los Angeles, offers this smart oxford with leather heel and roomy toe in black or brown calf, priced at $8.95.

Middle left: O'Connor & Goldberg, Chicago, is showing this pump with attractive moccasin forepart in antique tan calf, priced at $3.98.

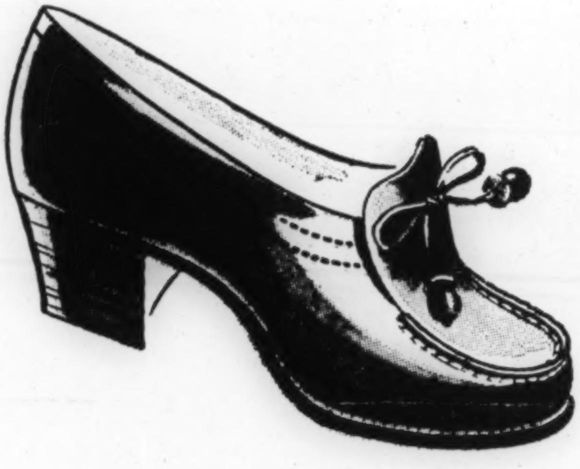
Lower left: This suede trimmed calf oxford offers good support for the foot and plenty of toe room. Priced by O'Connor & Goldberg, Chicago, at $3.98.

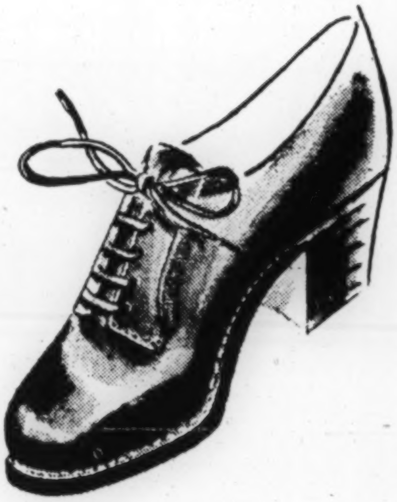
Upper right: Hudson's, Detroit, is showing this rust tan oxford with perforation detail, priced at $6.75.

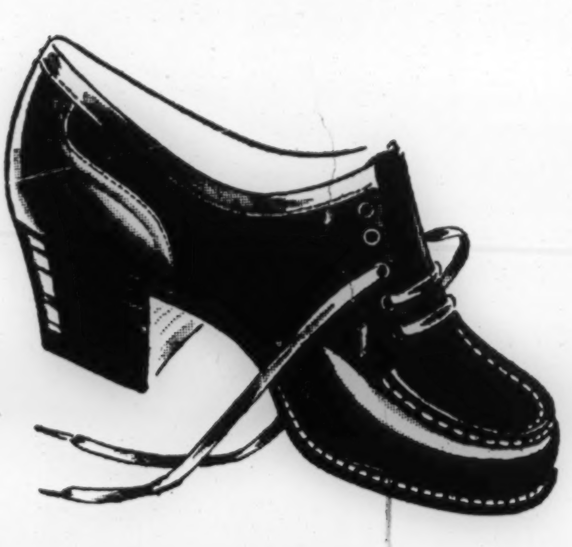
Second right: A popular brown calf monk with instep strap and buckle, shown by The Broadway Store, Los Angeles, at $8.95.

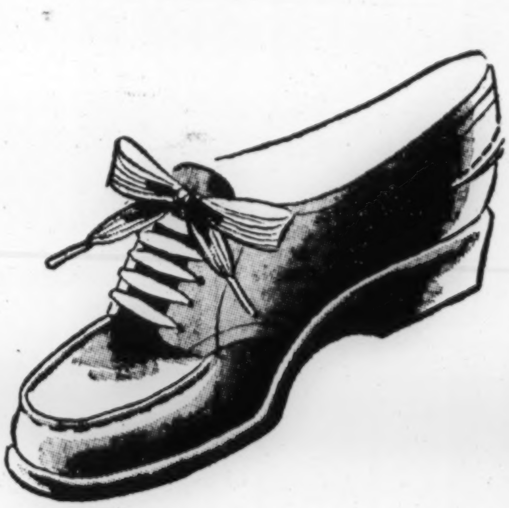
Third right: Sommer & Kaufman, San Francisco, offers this five eyelet oxford with comfortable seamless toe at $9.95.

Lower right: A popular moccasin style shoe of soft leather offered at $5.95 by A. Harris & Co., Dallas, Tex.









All Drawings courtesy
National Research Bureau, Inc.
Chicago and New York

SHOE FACTORY

"Occupational Shoes" Now Ready for Women Workers

IN 1940 only four factories in the United States were listed as making women's work shoes. Actually, there were in addition 10 or more small shoe manufacturers making specialized farm shoes, pegged shoes, and heavy duty shoes for women usually sold through catalog houses and chain stores. In 1943 there are eight manufacturers ready to produce the new WPB specified steel toe safety shoes for women, 11 factories making special safety types with other protective devices other than steel toe boxes, and over 100 women's shoe manufacturers where the specialty of the house has been detailed in a simplified version and designated as a "work shoe."

The range of prices covering these shoe producers is from $3.00 to $12.50. In price brackets from $7.50 up the shoes are in grades, constructions, and types better suited to women in white collar work, and in office, laboratory, and research occupations. These shoes augment the heavy duty types available and the newly designed safety shoes, and grouped as a whole they represent occupational footwear rather than just work shoes alone.

New "Vitamin Appeal"

The term "occupational" to describe clothing as well as shoes lends a new dignity to that great army of women presently employed. And it is quite possible that it will break down the reluctance of many women workers to don the styles of clothing that can contribute most to their efficiency and safety. Large stores in communities where there is a growing population of workers are installing special departments catering to their needs. They discard the term work clothes in naming these departments for the simple reason that the term has bad connotations. Groping around for some descriptive term they come up with such names as "Duration Clothes," "Duty Clothes," "Women-at-Work Department," "Women Working," etc.

In 1943 the number of women employed in the United States is estimated to reach the 18 million mark and still go on rising. Of this number over ten million are engaged in much the same type work, if not the same type of employment as before Pearl Harbor. Women in war industries total a small percentage of all women who work. But the entrance of women into the great wartime production plants focuses public interest on all working women. Because the health protection, the industrial efficiency of women in war industry are of vital importance to further the war effort, what is being done for them will also aid all women employed. Safety engineers, government bureaus, personnel executives, with leaders in health protection, have studied the clothing needs of women in these war plants. Manufacturers of clothing, of safety equipment and accessories, and of shoes have worked at top speed to put the result of their findings into actuality. What they now offer in protective clothing, what they have accomplished in producing for these women war workers, will eventually transform the clothing habits of all working women. These are not just work clothes, they are OCCUPATIONAL CLOTHES. And the shoes being made for protection against various industrial hazards are not just work shoes, they are OCCUPATIONAL SHOES, newest exponents of functional design.

Almost anything would be preferable to the term "work shoes" if the reaction of the typical shoeman, manufacturer, salesman, or retailer, is any criterion. Yet they are working like beavers on models that are practical, comfortable foot coverings for women workers — manufacturers on production, retailers on the problems of distribution. There are many within the trade who express trepidation over the possible inroads by these shoes on their business in regular shoes. These are the same minds that put play and casual shoes out of bounds until sales figures indicated they stimulated business on all types of footwear.

Ninth of a series by

Alfred Henderson

Reporting HIDE AND LEATHER AND SHOES' study of women's work shoes

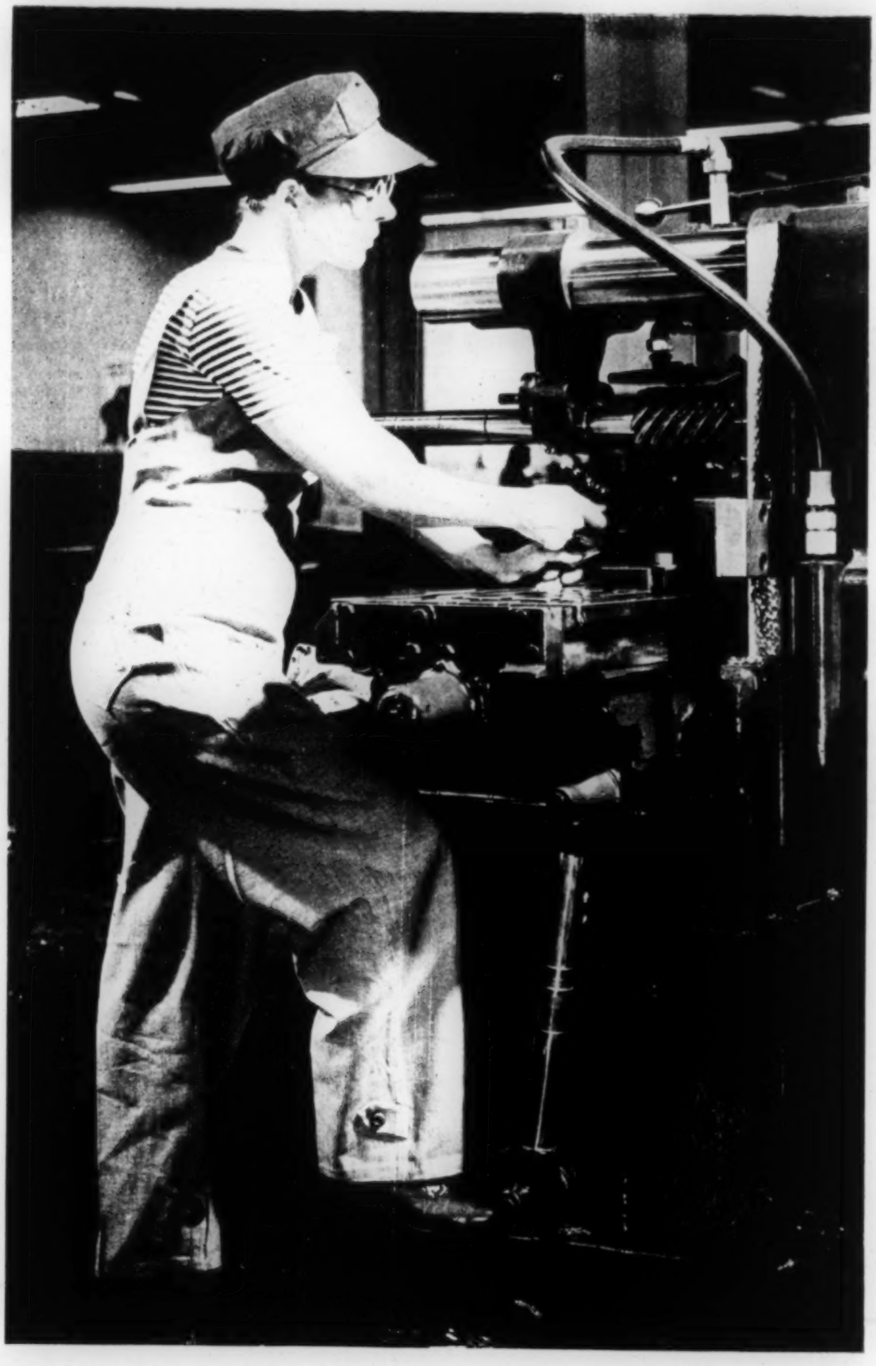
Safety Shoes Not Essential

When it comes down to real facts, it is shown that even within the walls of wartime factories, there are many operations and types of work done by women with no particular hazards involved. But there is still one-track thinking about proper shoes for employed women. This is indicated in certain Governmental reports, in suggestions from authorities on health and safety, as well as within the shoe industry. There is a tendency to accept one type, the six-eyelet blucher, with one specific safety feature, the steel or plastic toe box, as the one shoe which will answer all the footwear needs of employed women.

NOTE

Specifications for and illustrations of the occupational footwear mentioned in this article start on page 19.

In one out of 10 occupations a safety toe shoe is essential, in the other nine, shoes with other types of foot protection or safety details are desirable. But all the women in the great ranks of millions employed are subject to common foot strain and consequent loss of efficiency if improperly shod. And most of them are! All the surveys show that: all the specialists in industrial health make impassioned pleas to get the right shoes on these women as previous articles in this series have pointed out.



Safety is the keynote in the entire costume worn by this milling machine operator. The overalls may be fastened at the ankles to prevent catching on certain types of machinery. Shoes are of an approved type to protect her feet from metal splinters and have a reinforced toe cap to prevent serious injury in case she should drop a heavy tool. Side screen safety glasses and an approved safety cap complete the outfit.

Photo courtesy Cotton Textile Institute

The immediate steps to improve this condition have been taken. Already we have an enormous upsurge of interest within the shoe industry. Many good shoes are on the market. Many shoes of correct type are being worn by the women in the factories. But in plants where they accept mandatory work garments with good grace, they still wear the wrong shoes. The biggest problem involved is the distribution method to be carried out. Correct types of shoes must be made easily available to these women. Up to now they have had little opportunity to buy the right types of shoes. Company stores very quickly eliminate shoes from the list of items sold within the plant. Too hard to fit: endless refittings and returns.

The women themselves are being rapidly converted to the wearing of safe, sane clothes. Through the press, on women's pages, over the radio, in the women's magazines, even in the great weeklies, women are being told of their importance in the new schemes of industry. Incidentally, they are being exposed to the most potent type of high-powered publicity because they see countless pictures of women in all the new trades, wearing the uniforms of those trades.

They are bound to be influenced by this type of educational material. And while the same problem has beset the shoe industry for as long as most of us can remember getting women to wear the correct shoes for the job chances are that they are going to be easier to teach in a shorter time, now that this national promotional campaign is under way. Shoe trade Utopia, now and after the war, when women no longer wear old bedroom slippers in the kitchen or in the factory!

Change in Distribution

In the past few weeks a change in the processing of women's industrial clothing has been made in many of the larger plants all over the country. Previously they had started out, when uniforms were first adopted, to supply the initial outfit, with shoes, at cost. In a few plants mandatory safety clothing was supplied gratis, with shoes at cost. In many plants, where garments such as overalls or slacks suits or coveralls were provided, women flatly refused to wear them. It turned out that these models were incorrectly designed. Either they were uncomfortable, or extremely unbecoming. In one instance they were impractical. The male workers dropped wrenches down the loose drop-seat pants of the coveralls and threw nuts and bolts down their low V-neck blouses!

Local department stores have, in the past six months, shown willingness to install special departments of specified clothing, accessories, and shoes, to facilitate the uniform outfitting of female workers. The women may shop in the store, or once a week the store sends a staff to the plant. Clothing is marked at prices representing a smaller markup than usual. Alterations are often included in the selling price, with certain exceptions for more costly types.

The larger plants all over the country, that have changed their method of uniform supply in recent weeks, have all worked out a cooperative plan with some local store. Only in ordnance and powder factories, in Government arsenals, chemical war plants, food processing plants, and where special protective clothing is mandatory, as for welding operations, are they continuing to provide women workers with uniforms from company stores. In certain occupations plant management is compelled to supply all everyday workers with fresh uniforms laundered on the premises. But the new development is towards providing in local stores everything in garment needs for the workers.

When it comes to the subject of correct footwear, many of the stores have left this item to the last. A notable exception is the effort made this year by the important stores all over the country, included in the Associated Merchandising Corp. group, to include footwear with all other types of clothing in their projected plans to cooperate with industry. At the meetings of representatives of all member stores, held in the New York AMC office, fashion coordinators even went so far as to eliminate general fashion discussions from their meetings. They stated that the whole subject of outfitting working women was far more interesting and important to their future sales than a study of fashion trends.

Consequently the fashion bureau of the AMC provided a full session for this vital subject, and shoes were not forgotten. In fact, shoes made up a large portion of the report, and plans to provide a variety of footwear types were made with a list of resources. If the success of these stores in past promotions is any indicator, then women all over the country are going to be well dressed for their occupations and loving it. "by courtesy of AMC stores."

This milling machine operator wears an approved coverall of soft finish denim, easy to wash and hard to wear out. Her other equipment includes a safety cap of buckram and Himalaya cloth, side screen safety glasses, and roomy footwear with rope soles.

Photo courtesy Cotton Textile Institute

By means of such cooperation with local retailers, the most vital element in correct footwear for women workers will be guarded. This is the stocking of adequate sizes, and the fitting of these sizes by trained shoe personnel, to provide footwear *correctly fitted.* No occupational shoes now available or projected for future production will be of any more value than the worn-out bedroom slippers if they are not fitted correctly by experts. That's why the method of providing workers with shoes at the plants broke down. They had no measuring devices, no trained fitters, not enough sizes in stock. Shoes were uncomfortable and workers stopped wearing them.

What Trained Workers Want

Shoes the women workers prefer, and styles they would like to wear, are not as impractical, strange to relate, as statements of some experts would have us believe. And at the same time there has been an astonishing advance towards better work

These two girl welders both have on denim slacks and shirts under the cowhide outer garments they wear for protection from sparks on overhead welding. The denim should be starched to make it more resistant to fire. The shoes they are wearing offer minimum support for the feet and little protection to the ankles.

Photo courtesy Cotton Textile Institute

shoe standards just in the past six months. Surveys made six months ago, and polls of workers just recently completed, indicate this improvement. Women have had a chance to study their own needs, and where six months ago some women were refusing to wear protective footwear, these very women are among those most anxious now to contribute their personal suggestions as to their footwear needs.

What these women workers say about the shoes they need makes good sense in terms of practical footwear. Like the suggestions made by women to improve their uniforms, which have been incorporated in later models, these shoe detailings prove that there is nothing better to test a theory than actual performance. And they often stump the experts who have not stopped to test their theories. They also reflect how broad is the spread of new techniques in everything from hats and shoes to cosmetics and protective skin lotions.

Shoe suggestions made by these women, particularly those of the younger generation, specify the innovations, the best of the improvements, the most practical of modern shoemaking techniques, and thus soar right over the heads of many specialists. Perhaps the Government experts, the health authorities, the shoe manufacturers, and personnel executives will arrive at some of these conclusions later on. In the meantime they are of enormous importance as signposts of the immediate future in work shoe detailing.

The pooled ideas of these women on the industrial front have been studied in relation to the various occupations in which they are engaged, the hazards involved in them, and the most popular and acceptable uniforms now being worn. The seven garment types, with their variations, as allowed priority by the Work Clothes Order issued by the WPB in November, plus other styles such as skirts, culottes, and jumper outfits not included in the Order but in wide acceptance; also specific uniforms endorsed by individual plants—all of these were considered in evaluation of the new types of footwear that must now be provided to wear with these clothes.

No! Too Fashionable

It is important to mention that, contrary to the expressed viewpoint of many men who have been striving to get the right shoes on their feet, these girls are emphatic in their rejection of either shoes or uniforms that smack of the fashionable. They state in no uncertain terms that they have no desire to be fashionable on the job. They want to look efficient, they want to feel comfortable, and they want to play safe. Lipsticks they still cling to, and some of them protect their long ruby-color nails with adhesive tape; some of them even wear Lana Turner sweaters right over their uniforms. (That's what got the Boeing executive so excited that he blew off steam to the press.) But the majority are like the young woman in the parachute factory.

"I want shoes that will help me do my job better. Shoes that will keep me efficient—can't make mistakes in this work; shoes that will protect my feet, when I'm near machines or just standing for long periods," she explained. "But I don't want the kind of shoes that tear me down; the kind that make me feel sorry for myself when I look down at my feet and see what I have on them."

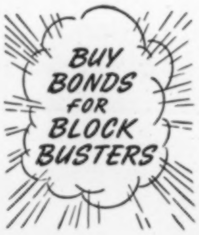
What she said spells *efficiency*, *safety*, and *morale*, and these are three words that might be incorporated in specifications for all work clothing.

New Models Projected

Types of work shoes and protective footwear already available cover a fairly wide field. In the recent study made of the additional types needed, it was shown that projected models would not compete with existing styles now available. Specific safety features omitted in available models, certain specified details gleaned from the poll of women workers, were combined in detailing new models. By a process of elimination this has been scaled down to seven occupational

The case of the missing box toe heater

Neither Scotland Yard nor the Crime Club can solve it. Frankly, we're baffled. Read the evidence. If possible, find the motive and work out the solution.


BUY BONDS FOR BLOCK BUSTERS

GONE! Yet our records list it on loan and in use. Not to be found in lasting room, stock room, or cellar — gone into thin air! Last seen two months ago, wearing a copper overcoat, in the company of Old Man Hindsight, as vicious a villian as ever trod the boards in an Op'ry House meller-drammer.

Seriously, its loss is important. Not one, but hundreds of irreplaceable box toe heaters made from critical copper, stainless steel, brass, and cast iron have been lost by careless handling — usually through putting off their return until tomorrow as today seems short of minutes. We cannot make *new* box toe equipment for the duration. Our 1943 complement is being served to Messrs. Hirohito & Co. as part of an indigestible metal diet, and though our stocks are complete, we no longer have an abundant supply of heaters to cover needless shortages.

Box toe heaters are as important to you as they are to us. Don't lose them. Don't store them. When replaced for any reason, return them *at once.* Take care of them by following a few simple rules and add months to their span of efficient usefulness.

DON'TS for box toe heaters. (Please pass on to lasting room foreman.)

Don't operate electric heaters at voltages in excess of the unit resistance marked on each heater.

Don't operate heaters without water in boilers.

Don't carry water supply cans by the spout — use handle.

Don't fail to clean gas burners every six months.

Don't order units, water cans, and other supplies in excess of the amount actually needed.

Don't retain heaters not needed on the line.

Don't stock them "for the time being." Send them back.

BECKWITH MANUFACTURING CO., DOVER, N. H.

BECKWITH
BOX TOES

VICTORY ARMY E NAVY PLASTICS

Spic and span white cotton coveralls like these, with a white tie-on cap, are chosen by women workers in many industries because they are easily laundered, attractively fresh, and satisfactorily protective.

Photos courtesy Cotton Textile Institute

shoe types, which do not duplicate types available. No versions of conductive or steel toe safety shoes, no ankle high boots, are included, since these are already in production.

Probably specialists in feature shoes will immediately bracket these seven new models as typical style shoes, entirely ignoring certain practical features inherent in the original tested classics from which they are adapted. It is not accidental that they resemble the casual and sports types beloved for their youthful appearance and easy-going comfort. These are in reality perfect examples of functional shoes, just as the work clothes now accepted as the most functional styles are adapted from play clothes and casual wear tested in happier times on playing field and resort sand.

It is perfectly true that all the accepted types of work and occupational garments endorsed by designers, safety engineers, Government bureaus, and plant managements, with the exception of coveralls, are practical working models translated from their original sports or leisure background to this new industrial environment. And if they weren't divested of every unnecessary ornament in their stripped down versions you'd recognize them for what they once were — the favorite feminine garb of the carefree days before the war.

That's why the shoe models by Evelyn Ziniti, projected for occupational wear, are vaguely familiar. They reflect in forthright terms, the style jargon of a generation. But they make no attempt to be fashionable. They are stripped down for action. They are made over the lasts of the types best liked by the women themselves—those with broad measurements in forepart, snug-fitting pear shape heels, and high raised front or walled front to allow for comfort when double socks are worn. These lasts resemble certain new style lasts, but they have free-fitting and comfort features taken from several types of wood tested in research projects and designed to incorporate moulded plastic safety toe boxes. They will probably look enormous in sizes 8 or 9!

These projected models made their first trade appearance in the New York offices of the Associated Merchandising Corp., and they are pictured for the first time in this issue of HIDE AND LEATHER AND SHOES. It is hoped that eventually they can be put into production as occupational shoes for women, to further the war effort. At this time however, they cannot be made without the dispensation of WPB. They are new patterns and new lasts, prohibited by Order M-217.

Right Price Brackets

Specifications on these shoes make them practical in the price brackets of $5.00 to $7.00. They must be made to retail at prices slightly below the regular markup for shoes of equal value. It is imperative that they be made as inexpensive as possible, yet with basic quality detailings that determine comfort such as full leather insoles, good grade fillers, and complete size ranges of lasts and patterns.

Women themselves, as well as plant managers, indicate that shoes at higher prices are not beyond the pockets of the workers. They are merely impractical since it is far better for health and protection to buy less expensive models more frequently. Factory operations, action of certain liquids, corrosives, even extreme conditions of humidity or heat that hasten the growth of bacteria in shoes—all of these factors combine to make frequent purchases of occupational shoes essential. In other words they do not expect their work shoes to last forever, since experience has taught them that factory soiled shoes are uncomfortable, after daily cleanings.

This girl wears jumper culottes of tan cotton poplin, with a white broadcloth shirt. The shoes are suitable for the assembly bench or some inspection work; not particularly desirable for railroading because they do not provide sufficient foot support and protection for those tasks.

One young woman in a food processing plant expressed a fervent desire for a washable shoe made of leather or processed cotton. Lacking either of these she asked for wooden shoes to wear over her regular shoes. Women in a giant shipyard asked for thick sole boots or wooden clogs topped with above-ankle leggings, to protect their feet from mud, rain, and heavy grease, encountered in shipbuilding operations out of doors in all kinds of weather. In a rayon mill, women workers requested shoes that would protect their feet from wet floors and damp humid conditions generally. These are all special cases, but they all serve to prove that work shoes and occupational shoes generally must be able to take it but should not be made to last a long, long time. And consequently they are grooved in the popular price levels of volume production.

Editor's Note—The tenth article in this series will be published in the "Shoe Factory" section of the Mar. 6 issue, and will report on other current promotions of women's work shoes. The complete findings of this important women's work shoe study will be summarized in a later article.

This tool grinder wears a neat slack suit of soft finish blue denim under a halter neck apron of the same cotton and a protective cap of denim. The shoes are roomy and comfortable and require medium to heavy soles and safety box toes, preferably of light plastic.

Photos courtesy Cotton Textile Institute

Types of Protective and Safety Clothes Worn by Women Workers in Civilian and War Production

(Note that some of the hazards mentioned are those listed in previous issues of "Hide and Leather and Shoes" from Woman's Bureau, Department of Labor.)

Protection against extremes of heat or cold, with insulated shoes made with cork, felt or rubber platforms, or cushion insoles.

Resistance against damp, also moisture and humidity; special treatment of shoes for farm work impervious to action of manure. Soles of special types, also upper leathers treated with oils as used in the Army, to give better wear and resilience.

Protection against common foot strain and bodily fatigue, by shoes with cushioned foreparts, pear-shape cushioned heels; regulation steel arch for ordinary types of employment such as teaching, nursing. Special wedge and scoop wedge and platform constructions for standing and pedal operations, using cork, felt, rubber, and new mastic cork compounds.

Conductive and non-conductive features in shoes, to protect against sparks and explosions in arsenals, ordnance plants, laboratory work, nursing. Special conductive constructions also non-conductive models with no metal tacks, eyelets, shanks, buckles, etc., and soles of reclaimed rubber, cork, or cork compounds; platforms with leather wood or rope outsole.

Protection against metal splinters, punctures, powder stains and burns, action of oil, alkaline or acid substances, on shoes made of firm leathers, treated with coating of shellac or oil. No openings in shoes except at side, and worn with button cuff slacks or jodhpur cut trousers fitted tightly over shoes. Boilable knee high socks and ankle socks.

Protection against discomfort in sitting or standing operations; no shoes with rubber gores, elastic inserts or stretchable leather, or use of plastics or heavy coated fabrics and leathers in upper materials.

Protection against heavy machinery, falling objects; shoes made with steel or plastic safety toes. Also with regulation shoes worn with metal toe, ankle or leg guards in addition. Side laces, or shoes minus laces in occupations where laces might catch in machine.

Protection against bad posture habits, by means of moderate and low-heel shoes, extremely flexible yet with a solid base structure, for reaching, standing and pedal operations.

Soft finish denim in patriotic stripes is used to make this smart, efficient costume used in the war production training school of the National Youth Administration. A hip pocket, and one further down the leg for tools, pleats at the waist to allow plenty of room for bending and stretching, and plenty of shoulder room insure working comfort. The shoes worn by this worker are of the type that will add to the efficiency, comfort, and safety provided by the gay costume.

Detailing of shoes with firm foundation, extremely soft and resilient upper construction for workers in precision operations requiring sustained concentration. Also types of soles to protect against falls on wet or dry slippery floors, suction rubber, composition, rope, wood patented non-skid soles.

Protection against dermatitis, by use of closed up shoes, made with firm yet porous upper leathers and with linings especially treated to resist bacterial growth.

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Full Chrome and Combination Tannages
Seasonal Colors, Natural and White
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★ ★

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WINSLOW
BROS. & SMITH
COMPANY
NORWOOD, MASS.

Safety and Protective Features Important in Occupational Shoes for Women in Occupations Cited

*WPB Priority

Slacks* with jackets,* blouses,* shirts.*

Coveralls* and overalls, worn over shirts* or with sweaters and cotton pullovers for warmth.

Aprons,* dresses* in wraparound and coat styles.

Smocks and tailored shirtwaist dresses.

Jumpers and pinafores worn over tailored cotton knit pullovers or woven cotton shirts.

Slack suits* in one-piece models that look two-piece. Culotte suits.

Flame-resistant cowhide aprons, shirts, slacks and coveralls for welding operations.

Water - repellant coveralls and aprons for special type protection in extremely wet, humid, or steamy conditions.

High, stiff head coverings, visor caps, turbans made of fireproofed and flame-resistant materials. To cover hair completely.

Plastic, metal, and plywood helmets treated for flame resistance.

These good looking young ladies are well dressed for light factory work or for household tasks. They are wearing Sanforized chambray coat dresses in practical styles for girls who require clothing easy to work in, easy to get in and out of, and easy to launder. Shoes should be selected only after considering carefully the nature of the workers' employment and any foot hazards that may be present.

Photo courtesy Cotton Textile Institute

Goggles, protective glasses, and facial masks for chemical plants and welding operations; various industrial uses.

Work gloves, metal - reinforced gloves, plastic cuff gloves, rubber gloves, for various protective uses.

Metal ankle guards, leg guards and arm guards. Also plastic guards to resist action of sparks, acids, hot liquids, caustics.

Knit cotton or rayon underwear to be washed daily as protection against dermatitis. White cotton or lisle knee-high socks that can be boiled if necessary, worn with darker color ankle socks, with slacks, coveralls, overalls. Regular length stockings for occupations not especially hazardous.

Note: Special weaves of rayon and the great range of durable cotton fabrics that can be washed frequently and still stand up are approved for work clothes. Processed cowhide, horsehide, and sheepskin in buffed surface resistant to liquids or flame, are essential worn over the cotton suits in some operations.

In Such Occupations As

Arsenals
Assembly work
Baking
Chemical Warfare
Cooking
Dress Manufacture
Food Processing
Hosiery Mills
Men's Tailoring
Ordnance
Precision Work
Textile Mills
Welding

Plants Making

Airplanes
Bomb Sights
Gas Masks
Jeeps
Machine Tools
Motors
Munitions
Tanks
Parachutes and Life Rafts
Wire for Signal Corps

Replacing Men

Chemists
Conductors, Bus Drivers
Cooks
Dairy and Farm Work
Elevator Operators
Expressmen
Gasoline Stations
Laboratory Workers
Messengers
Packers
Pharmacists
Soda Jerkers
Taxi Drivers
Truck Drivers

General Specifications

Occupational Shoes

Seven Projected Models for Women Workers

Designed and Made by Evelyn Ziniti
from Specifications by Ruth Hamilton Kerr

Outsoles, Insoles, Bottom Details

Lighter weights six and eight-iron soles on welts stitched aloft. Also non-critical sole materials such as vegetable tan splits, sharkskin leather, reclaimed rubber, rope resin plastic, flexed wood, and non-skid composition. Rope soles, flexed wood soles, and composition soles have non-skid features for wet or dry slippery, oily floors. Resin plastic, sharkskin, reclaimed rubber and specially treated oiled leather soles for resistance to damp and wet. Flexed wood soles damp-proof.

Special types of platforms and wedge heels devised to give adequate support, without the use of steel shanks. Also provide cushioned comfort on cement floors and wood floors. Platforms of felt, cork, composition or new cork compound, covered with leather, to insulate against heat or cold. Platforms absorb shock and flexing, and bottoms do not wear through as quickly. *Heels* 11/8 *to* 13½/8, for various requirements of women workers, in spring wedge, military, full wedge, and scoop wedge styles, all with inset heel lifts of hard rubber compound.

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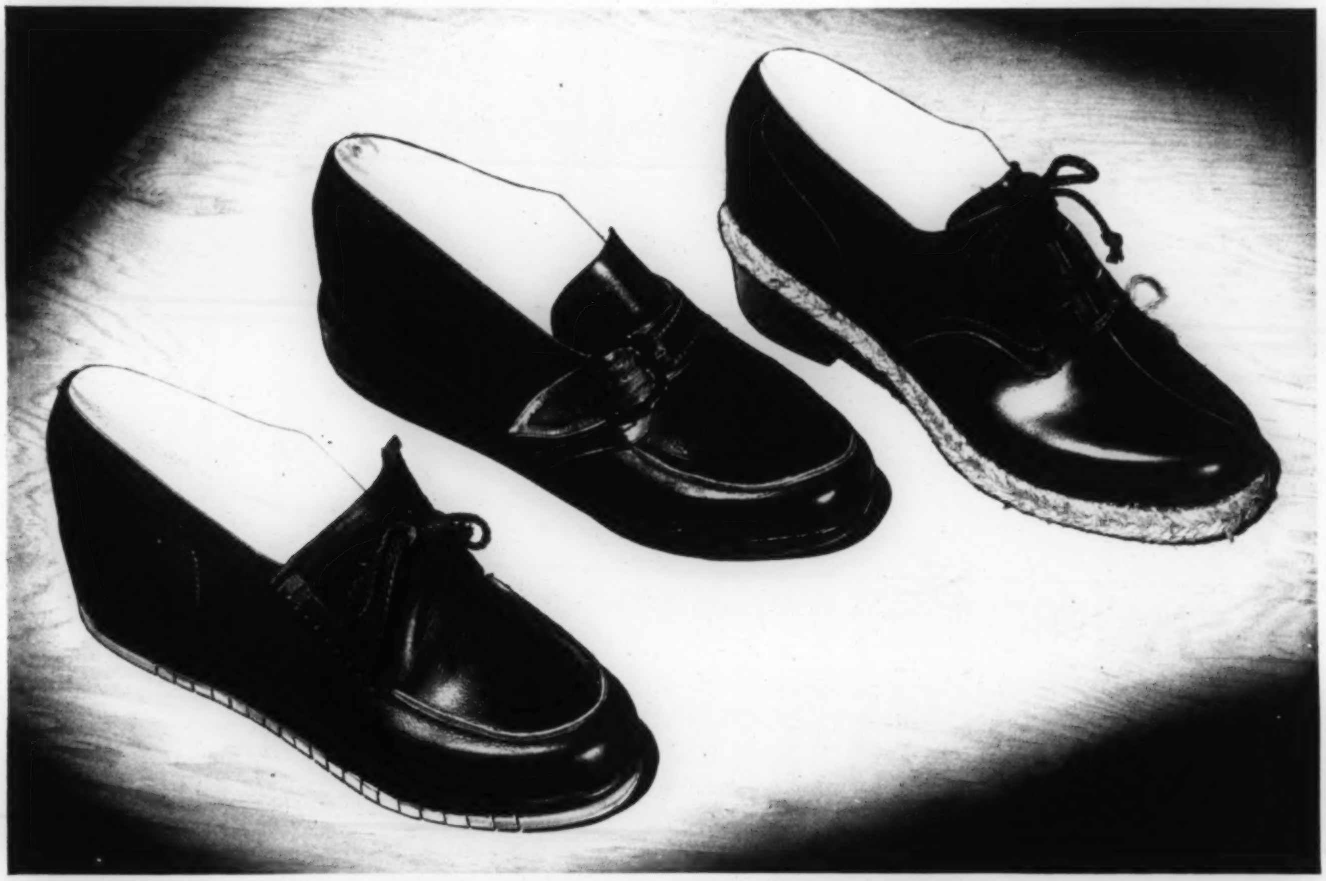
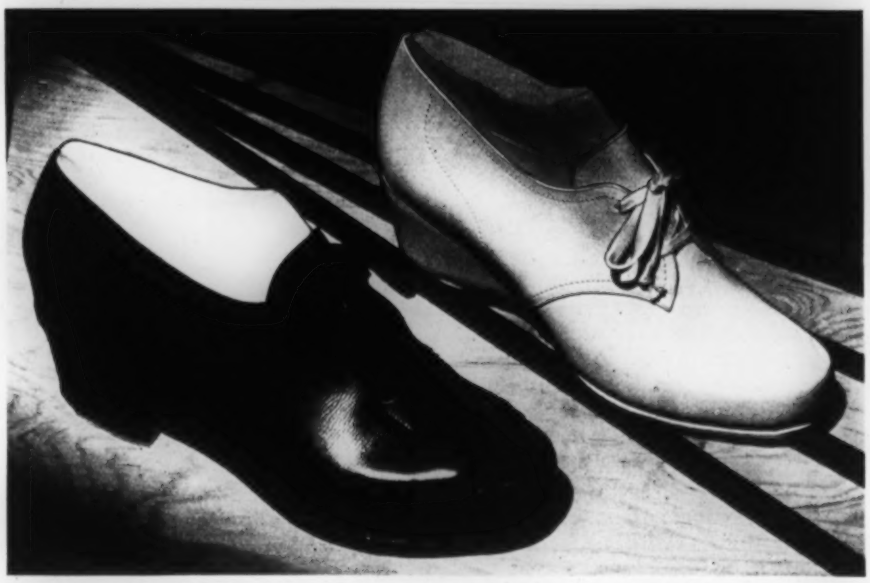
Uppers, Lasts, Linings

Full chrome-tan leathers treated for resistance to oil and damp, with oils as used by the Army. All selected for firm yet flexible texture, and finished with coating film of lacquer to prevent penetration by slivers of metal. Top-grain cattlehides, elk finish leathers, smooth or boarded finish regrain calfskins, alligator grain leathers, also cattlehide splits, in damp resistant sueded finish. In black, Army russet, dark blue, to look well with approved uniforms. Also white for specified purposes in medical and laboratory work. Neutral-back chrome leathers for unlined shoes to prevent dermatitis.



NON-SKID SOLES FOR OILY OR SLIPPERY FLOORS

In three shoes with protected fronts to wear with button-cuff uniforms that fit over the shoe, protecting the ankles. Also to wear with metal shin or leg guards in hazardous occupations. Left: Flexed wood sole moccasin with tie adjustment under tongue. Lace can be tied under tongue in cases where there is danger of catching in machines. Full platform and wedge to cushion foot. Army russet regrain calf. Center: Buckle moccasin in black side leather with full wedge, half platform and reclaimed rubber bottom. Buckle is new plastic type. Right: Sleeve loop lace stay on tie with rope sole, military heel with rubber toplift. In Army russet side leather with protective film coating. All shoes with plastic safety toe box.



PLATFORMS TO CUSHION FEET IN STANDING AND PEDAL OPERATIONS

In two types that lace and adjust easily, both made with cotton laces that do not come untied. To be worn with button cuff slacks, coveralls or jumper overalls that fit snugly down over ankle and shoe. Left: Laced to toe sleeve lace stay oxford in soft yet firm creased side leather with full platform and regulation 11/8 military heel. Oiled split leather sole. Right: White elk tie for laboratory workers and workers in food processing. Scoop wedge heel with full platform; heavy plastic bottom. Both with plastic safety toe box.

Lined shoes also detailed to prevent dermatitis, with full vamp and quarter of needle-perf leather, coutine, rayon and cotton faille, or cotton drill; or with leather quarter linings and uncoated drill vamp linings. Doublers are not used with types of leathers specified as this type of heavy construction is undesirable, since heavy lisle or cotton socks or double socks are worn. Unnecessary also with modern methods of backing and taping; and reinforced leather or composition counters.

Heavy plastic safety toe boxes with cloth reinforcement, moulded over special new lasts with broad high toe or slight ridged wall; pear-shape heel, broad at bottom, wide shanks and contoured bottoms. These are free-fitting lasts with broad measurement at ball, designed for support without pressure when standing, walking or sitting. To be fitted over two pairs of socks like ski shoes.

Leather inner soles, leather sock linings, resilient compound fillers in welts, special rubber and cork compound pads in forepart for other constructions.

Welts, single sole and stitched cement constructions desirable. Stitchdowns in reliable grade also acceptable.

Special Details, Safety Features

Heavy non-slip cotton laces, oxford, ghillie, and tie adjustments to be worn under button-cuff slacks or coveralls that cover laces and prevent their getting caught in machinery.

Special supporting type heels and platforms replace steel in shanks yet are made with provision for pedal operations — slight spring, scoop shapes, also Dutch boy, extension wedge, and low military. This safety feature incorporated in all these models, making them suitable for wear in ordnance, chemical and powder plants—*no metal of any kind* except copper nails for heels. No metal buckles, eyelets, shanks, screws or staples. Heavy moulded plastic safety toe box replaces steel safety toe device which is dangerous where sparks are a hazard.

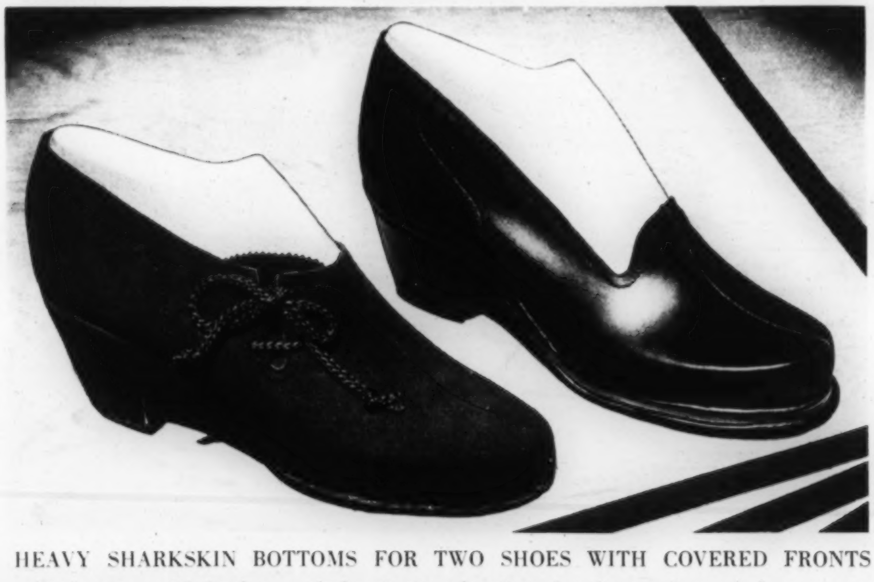
Covered fronts, by means of bellows tongues, large tongues, or side fastenings, to prevent penetration of harmful liquids or corrosives through to socks and feet.

Side fastened and slipon types especially for use with gaiters, leggings or metal ankle and leg protectors which give added support. Moulded plastic leg and ankle protectors used with these shoes where metal is undesirable. Slip-on type good for sitting operation.

Laced and tie adjustment types for standing operations or for those requiring pedal, stretching and reaching movements in factory operations.

Boots of ankle and above ankle height have not been included, since regulation oxford heights provide wider latitude of styles for wide variety of operations. In certain food processing operations, as in farm and dairy work, boots are essential however. Leather for farm boots is treated to resist acid action from manure.

All models designed to give firm base support and softness and flexible comfort in uppers. No corseting, no crutch supports. Full range of right and left patterns and lasts imperative to provide correct fit.



HEAVY SHARKSKIN BOTTOMS FOR TWO SHOES WITH COVERED FRONTS

To be worn with leather or cloth gaiters or leggings that fit over front of shoes to protect from liquids, corrosives, abrasives, and metal particles penetrating through the shoes. Left: Heavy weight split, water-resistant finish in Army russet color side-lace tie with extension heel to give proper support. Right: Dark blue corrected grain calf with protective film coating, in front seam slipon with Dutch boy heel and full platform of cork compound. Both with plastic safety toe box.

SHOE FACTORY

Prejudice Against Women's Work Shoes Reaching Vanishing Point

IT IS still true, as has been asserted in previous articles in this series, that working women constitute the most improperly shod group in America when they are on the job. It is no longer true that the needs of these working women are being almost universally ignored by shoe manufacturers, distributors, and designers. The essentials of good work shoes for women are being studied and incorporated in many of the current shoe lines; the possibilities of the potential market for these shoes are being developed by leading retailers and department stores throughout the country, especially in sections where war work is at a high level; and the blind prejudice against the utilitarianism and functional value of properly designed and constructed work shoes for women is rapidly vanishing.

Furthermore, these shoes are now being identified by their proper names in many cases, smart merchandisers having learned the truth that women may be intrigued by glamorous apparel names and be constantly searching for fashion frivolity, but when they work they are as practical minded as their brothers on the job. In the course of this study HIDE AND LEATHER AND SHOES found that the thousands of working women questioned frequently complained that suitable shoes for work wear were not properly identified by dealers, and that they wanted to know where to get the kind of shoes they needed for wear during the hours in which, on hundreds of kinds of jobs, they earned the wherewithal to purchase glamour for their leisure hours.

Shoe Industry Deserves Credit

If a large part of the blame for the lack of proper women's shoes in the past must be laid at the door of the shoe industry, it is only just that most of the credit for the tremendous improvement in this field be given to the industry. The trade's past neglect of women's work shoes was largely caused by the fashion and merchandising theories which have governed the women's clothing industries since World War I. Shoe designers were inspired by a constant search for beautiful, exotic, and frivolous appeals to feminine fancies, and shoe manufacturers and retailers were sincerely convinced that women who sought open toes, open heels, open shanks, light sandals, and such models and wore these shoes through all sorts of weather conditions would balk immediately at footwear that would be most suitable for work wear; especially if the footwear was openly sold as "work shoes". Convinced now of the fallacy of those theories, the shoe industry in recent months has been working overtime to develop the most urgently needed type of footwear in the women's field.

It is generally acknowledged that the study initiated over a year ago by HIDE AND LEATHER AND SHOES, and carried through as a continuing project for many months, was the first major step to smashing the barriers of tradition and securing proper shoes for working women. The project was welcomed from the first by foremost foot health authorities, approved by various Government agencies, and received with open minds by even the most skeptical shoemen. It was the cooperation of these groups and of employers and working women during the earliest stages of the study that made possible the vast improvement in the development and distribution of women's work shoes that has taken place in the past few months.

Eighth of a series by

Alfred Henderson

Reporting HIDE AND LEATHER AND SHOES' study of women's work shoes

Most of the shoes now being promoted for women's work wear are exceptionally suitable for the purpose—an accomplishment of which the industry may well be proud when it is remembered that a year ago women's work shoes were the "orphans of the industry". Some of the shoes presented as "work shoes", with special promotion directed to women war workers, are decidedly unsuitable for the purpose and should be subjected to investigation and suitable action by the Federal Trade Commission, as they constitute an out and out fraud. Fortunately, such fakery is in the minority.

Other manufacturers are making larger quantities of sport, comfort, and other low heeled types of shoes which they do not classify as work shoes because they were not developed specially for that purpose, but which are acceptable for work wear under employment conditions where no special occupational hazards exist, and which have gained much popularity among working women in some sections.

Two Popular Safety Work Shoes

Two of the most popular types of shoes which have been specially designed for women workers are the "Resistoe" shoes made by the Gale Shoe Mfg. Co., North Adams, Mass., and the "Guardettes", made by the Brown Shoe Co., St. Louis. Both of these shoes are being extensively promoted through retailers and employers of women.

Both lines of shoes feature "Lucky Strike" plastic base toes, which have withstood 400 lbs. of pressure in laboratory tests, coming through with an indentation of only 34/100 of an inch. While the plastic base safety box toes are not designed to furnish the same protection as steel safety box toes, they are approved for safety under conditions where the greater protection is not needed and where lighter weight and conservation of steel materials is desirable.

In addition to the plastic safety box toe, the Gale shoe which is illustrated has steel shanks, sturdy upper leathers, rugged leather soles, and Goodyear welt construction. It is featured in newspaper advertising directed to working women and emphasis is laid on the tremendous loss caused by industrial accidents (in 1941, industrial accidents caused a loss of 480 million man days of labor and as estimated four billion dollars money damage). Promotion copy used by Gale says:

"These safety shoes combine current style and exceptional fitting qualities with safety features and rugged service. Every feature of these shoes has been carefully checked with safety engineers to insure maximum protection. These are real safety shoes, especially made for war workers, incorporating as their chief feature box toes which, utilizing no metals, are made on a patented process designed to protect toes from any falling or moving objects."

Promotion In Industrial Plants

Promotion of the Brown work shoe line is supported by the distribution of bulletin board posters advocating the use of both men's and women's Safetoe footwear in industrial plants: distribution to employers of pay envelope folders which "provide every safety director with a valuable means of encouraging the use of Safetoe shoes at the moment the workman has the money to spend": and a special "Safetoe measuring device" which is provided to assist in fitting the shoes properly. These promotional aids are distributed free to employers in quantities needed.

Emphasis in advertising copy is laid on the reputation of the manufacturer and the design and construction of the shoe. Copy reads:

"Brown Shoe Co. is America's foremost manufacturer of sport welt shoes for women. 'Guardettes' are made over a proven Industrial Last to give women in industry a safe, smart appearing shoe with essential comfort specifications." The Lucky Strike plastic base box toe is then described and the specifications of the shoe outlined. One popular model (illustrated) is a gun metal blucher oxford with seven iron chrome leather outsole, safety box toe, 12/8 heel with rubber composition top, and is available in a wide range of sizes.

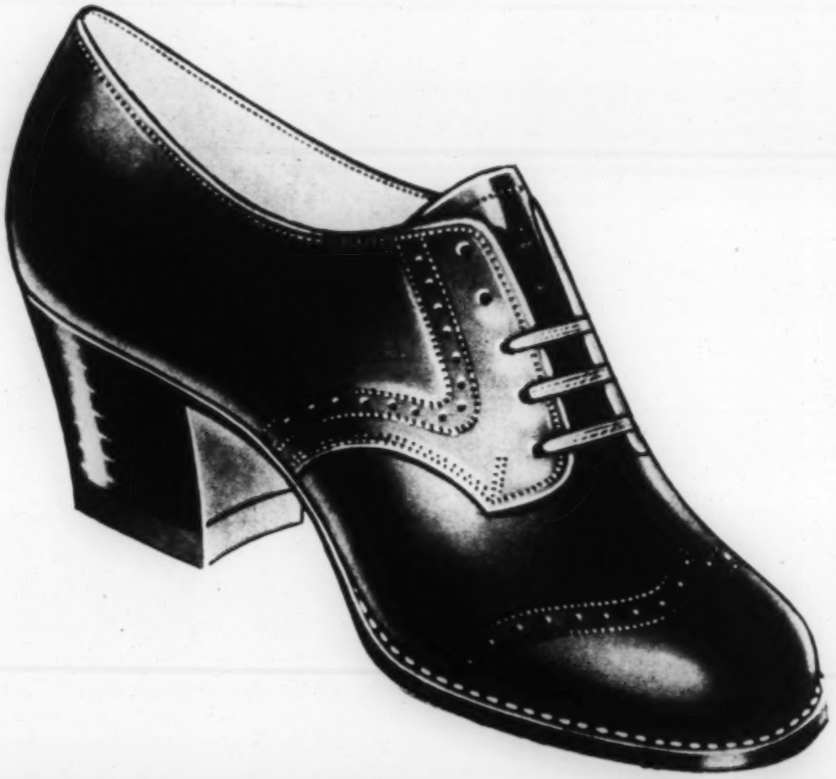
Sport Shoes For Work Wear

Two sport shoes made by the General Shoe Corp., Nashville, Tenn., which were mentioned in the Dec. 5 issue, are illustrated in this issue. While these were not designed specially for work wear, and are not being so promoted, they incorporate many of the functional characteristics of good work shoes together with good styling and attractive appearance. The shoes illustrated have gained considerable popularity among working women, and are made with seamless vamps, five eyelet uppers, and desirable heel heights.

After a number of months' study, the American Standards Assn., New York, has completed the project which it undertook at the request of the War Production Board and the Office of Price Administration: the compilation of "American War Standard Specifications" for women's safety toe protective shoes. The Association has prepared a draft of its proposed standards, which is intended for use during the war effort. Details of the specifications may be slightly revised and are not yet ready for publication.

Standards Drafted For Protective Shoes

Although the present standards cover only protective footwear, it is believed that standards may be developed later for other types of work shoes for women, with special attention being given to types of industrial footwear which do not require special safety features and in which the



The "Guardette", made by the Brown Shoe Co., St. Louis., is a safe, comfortable work shoe with a plastic safety box toe and other safety features that are described in the accompanying article. It is made in brown or black calf. . . .

incorporation of special safety features would involve unnecessary expense and consume vital materials.

Among the manufacturers who have recently been advertising women's work shoes to the retail trade are Boyd-Welsh, Inc., St. Louis, which offers a variety of oxfords and pumps for various forms of "duty wear"; the Florsheim Shoe Co., Chicago, which presents a line of "military shoes" for "camp, canteen, office, and shop"; and the George E. Keith Co., Brockton, which features a buckle oxford for "nurses, WAACS, WAVES, workers and housewives."

Promotions Increased

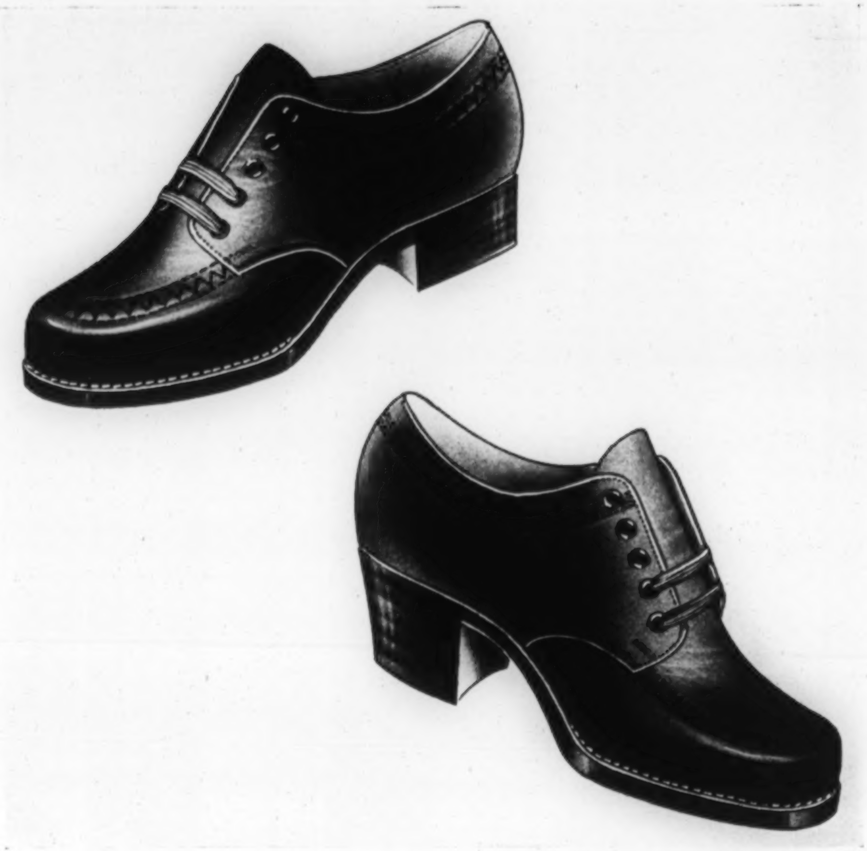
Shoe retailers and department stores are promoting women's work clothes extensively. Some chain units and independent retailers are working with officials in local industrial plants—particularly in war industries—and are featuring in various ways recommended types of work shoes, frequently arranging for bulletin board announcements, pay envelope advertisements, and factory displays of the shoes carried in stock for women workers.

Leading department stores throughout the country have installed special departments well stocked with work clothing for women, and report that these departments are very popular with women workers. Some of these departments carry a variety of shoes suitable for work wear, some carry only protective work shoes, and some have not yet included shoes.

Employers are giving the women's work shoe problem a great deal of attention at this time. Plant managers, safety directors, and personnel heads are studying suitable types of footwear for each occupation and many are making specific recommendations to the workers. In a few cases, the wearing of protective footwear is mandatory; in many cases the wearing of open shoes is prohibited.

The recommendations of the employers and the preferences of the workers cover a wide range of shoe types, varying generally according to the nature of the work and the protective requirements involved. Sport shoes with medium and low heels are gaining in popularity among women workers who require only comfortable, well made shoes with safe heels.

The tentative specifications for basic women's work shoes prepared by HIDE AND LEATHER AND SHOES and published in the Nov. 7 issue can be used as a guide in many of the studies now being made by Government agencies, consumer groups, manufacturers, retailers, and employers. Some modifications have been incorporated in these specifications to meet special conditions for which particular shoes are being designed or recommended. Additional modifications may be made in the interest of conservation of vital materials.



Two attractive sport models made by the General Shoe Corp., Nashville, Tenn., have won favor for work wear by women whose occupations do not require special safety features. These shoes do not have safety box toes, but they are comfortable, attractive, and durable; made with seamless vamps for greater comfort; with five eyelet uppers for good support; and with two heel heights most suitable for general work wear. . . .

Synthetic Insoles Suitable for Work Shoes

An example of the latter form of modification is noted in regard to insoles. In the tentative specifications, flexible leather insoles are rated as preferable, with "some fibre insoles acceptable." In this connection there is a shortage of leather which must be taken into account and there are certain price limitations that economic conditions impose. These two factors weigh heavily in any consideration of specifications, because the leather situation is not improving, and although many women workers today are earning high wages, there are many others, who also need suitable work shoes, whose incomes are modest and whose budgets are restricted.

Good flexible leather insoles are still preferable for most types of work shoes, but fibre insoles of certain types are preferable to poor quality leather. The use of the word "fibre" in the insole specification may be somewhat misleading, as it implies commonly a cheap insole material with no bonding agent to tie the fibres together.

Such insoles are unacceptable for women's work shoes because they are frequently uncomfortable from the start, they usually crack long before the shoe is worn out, and if they are subjected to water they fall apart.

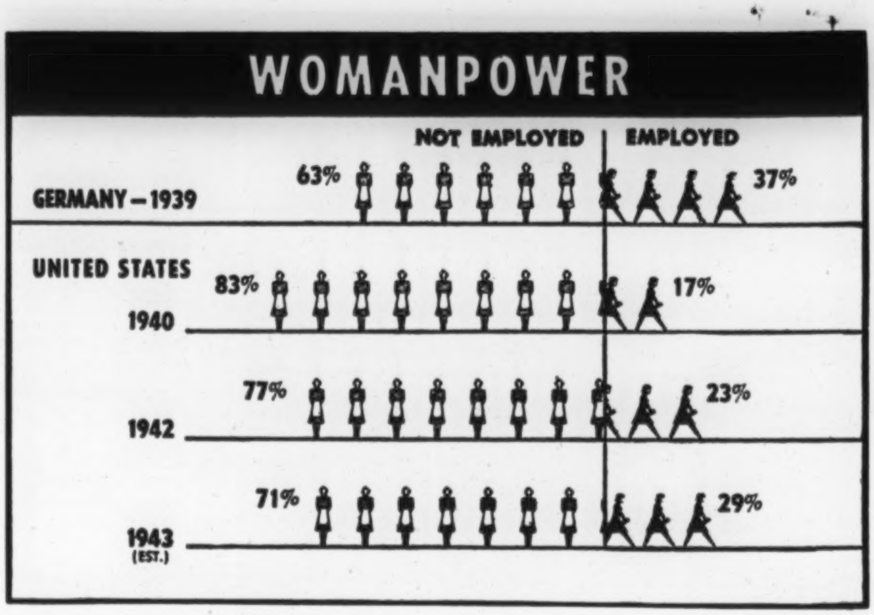
Acceptable types of fibre insoles include the so-called synthetic insoles such as those manufactured by DuPont, the U. S. Rubber Co., and the Dewey & Almy Chemical Co. Such insoles are made from carefully selected fibres of purified cellulose cotton, etc., and are formed into sheets, impregnated to bond the fibres together to build specific shoemaking properties demanded of an insole — flexiblity with cross-sole rigidity, cushioning comfort, free breathing, uniformity, economical cutting of large sheets, tack and stitch holding ability, firm edges to hold the shape of the shoe, etc.

These insoles are made in grades to meet the needs of the price class shoes in which they are used. In the past they were impregnated with latex. Since latex is no longer available they are now being produced with various types of other impregnants to give the same general characteristics—so far as possible—possessed by latex.

Amended Specification For Work Shoe Insoles

The tentative specification for insoles for women's work shoes, as amended, is as follows:

Insoles—Flexible leather insoles of good quality preferable. Bonded fibre or synthetic insoles acceptable. In the interest of leather conservation the acceptable fibre insoles are expected to be used extensively for women's work shoes, especially in price grades where it would be too expensive to use best flexible leather insoles. Poor quality leather insoles and unbonded fibre materials of any kind are unacceptable.



The above chart graphically illustrates the increasing importance of womanpower in American industry—womanpower which can be used most efficiently only if the women workers are well shod. Of the number of employed women in 1940, two per cent were employed in war work; this rose in 1942 to six per cent; and it is estimated that nine per cent of the women working in 1943 will be on war production jobs. Chart drawn for the OWI.

One shoe manufacturer observed that the specifications for linings for women's work shoes were "loosely drawn, and made no distinction between vamp linings and quarter linings." As the lining of any shoe, and particularly of a shoe where comfort and service are prime requisites, is a fundamental factor in the value of the shoe, the tentative lining specification is reprinted and further discussed.

Discussion of Requirements for Linings

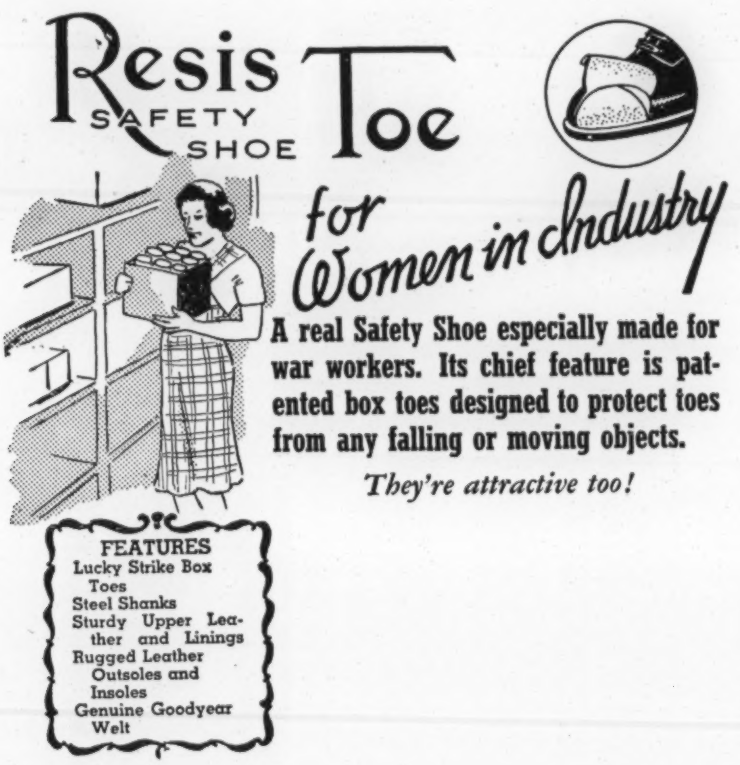
"Linings—Some foot health authorities believe leather linings are undesirable because two pieces of leather with flesh side together limits the porosity of both pieces and prevents the normal stretch and elasticity of the leather. They hold that unlined shoes also may be undesirable because the flesh side causes stocking drag when the feet become warm or moist; this was evidenced by a test made among 450 women working in 16 laundry plants. Other authorities prefer for general work wear a shoe with a soft porous leather lining, with plain or coated fabrics deemed acceptable. It is important that the inside of the shoe be as smooth as possible, with few seams and no wrinkles."

The manufacturer who seeks further light on the subject of linings says:

"Shoe linings are generally divided into two classifications: Vamp and quarter. This was not done in the specifications. Vamp linings are nowadays almost all cotton drill for men's and children's shoes and I believe a large percentage of women's shoes also carry drill. Quarterlinings, on the other hand, are almost always leather or imitation leather. In any specifications a distinction should be made."

In the original tentative specifications, the materials recommended were intended for quarterlinings.

(*Continued on page 20*)


Resis Toe
SAFETY SHOE
for Women in Industry

A real Safety Shoe especially made for war workers. Its chief feature is patented box toes designed to protect toes from any falling or moving objects.

They're attractive too!

FEATURES
Lucky Strike Box Toes
Steel Shanks
Sturdy Upper Leather and Linings
Rugged Leather Outsoles and Insoles
Genuine Goodyear Welt

Safety features of the Resistoe safety shoe for women workers are featured in newspaper advertising by the Gale Shoe Mfg. Co., North Adams, Mass. "Hide and Leather and Shoes" found that women workers complain that suitable work shoes are not readily identifiable in dealers' offerings—a complaint which advertising such as this overcomes.

be 'controlled' with silk rayon. And while rayon can be used for more expensive shoes and give better service than leather or rubber, it still is not as practical as cotton in automobile tires, as has been recommended in Washington," Mr. Simpson says.

"Through the use of plastic we are able to mould the silk rayon without special atmospheric conditions in our factory, but when rayon is used for automobile tires these special atmospheric conditions must be used thereby resulting in costly installations and continuous close inspection."

Mr. Simpson added that it seemed ridiculous to expand rayon tire production, spending over $50,000,000 for vitally needed equipment, when there is ample heat-resisting cord, tested and proved since 1938 for this purpose. Low gauge cotton cord for tires will save more than the insignificant amount of rubber the rayon process sponsors claim it will save. When a rayon tire is cut and moisture penetrates into it the tire is worthless, Mr. Simpson pointed out, whereas moisture can be readily dried out of a cotton built tire.

In addition to the rayon shoe sole displayed by Mr. Simpson, he also has introduced other new developments in this field. They include

Shoe soles from the vegetable garden! Elliott E. Simpson, independent rubber dealer, shows Chicago shoemen a variety of soles made from plastic materials containing no rubber, and displays at the left the vegetables from which the soling materials originated.

Too much cement is

Wasteful and Dangerous

Use B.M.W.Co. machines that save, because they apply just the right amount of adhesive speedily and cleanly.

Their uniformity of application insures freedom from bubbles, air pockets or loose edges.

We specialize in the manufacture of cementing machines

BOSTON MACHINE WORKS CO.
LYNN MASS. U.S.A.

BRANCH OFFICES:
Whitman, Mass. Columbus, Ohio Chicago, Ill. Kitchener, Ont. Westfield, N. J.
Johnson City, N. Y. Cincinnati, Ohio Milwaukee, Wis. St. Louis, Mo. Los Angeles, Cal.

soles, which save two-thirds of the former amount of reclaimed scrap rubber used; wood soles, which have all the flexibility and pliability required and also have the appearance of leather; soles made of hardened and waterproofed cord combined with plastics and reclaimed scrap rubber; and soles made of yards and yards of lace for style conscious Americans.

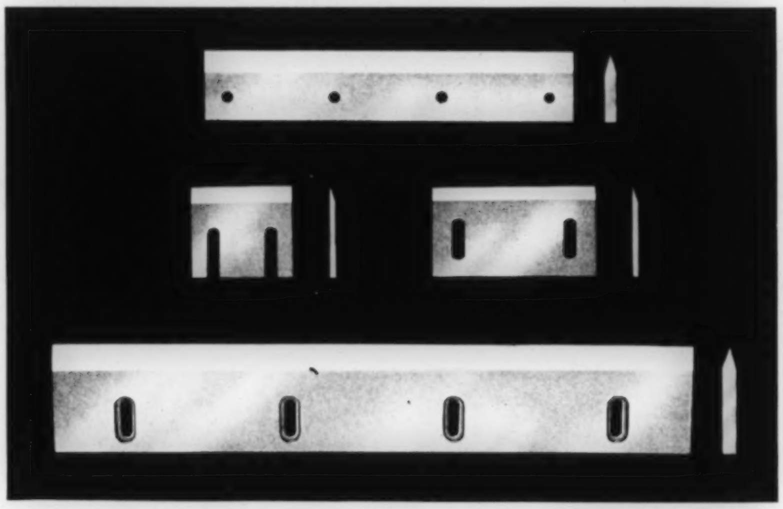
The soles made by Interrub Processes are fashioned from plywood which is made flexible by an ingenious arrangement of slits sawed through the wood, permiting the sole to be flexed freely without cracking. These soles can be cemented or stitched to the bottom of a shoe constructed by conventional methods, and are being made of wood alone or of wood and reclaimed rubber as shown in the accompanying illustration.

Variety of Soles "For the Duration"

Although some of the other soling materials are less spectacular than those described, they are not unimportant to the shoemaker of 1943. It is entirely possible that wood, plastics, rope, carpeting, and other materials will have a secure place in shoemaking for the duration of the war. Rope soles are considered valuable in war plants where sparks from shoe nails might touch off a disastrous explosion. Wood soles have long been popular for work shoes in the "wet industries." Plastics have grown to popularity among consumers in recent years. "Rocker soles" of solid wood, with a rocker shaped bottom, are fashioned after the wooden sabot of Europe and have a considerable following.

Most important aspect of the development of new soling materials is that their use will enable shoe manufacturers to maintain production schedules which cannot be upheld if shoe uppers cannot be bottomed. Furthermore, the novelty of many of the materials may create fashion interest that will offset some of the fashion restrictions that have been imposed in recent months, and the use of these materials will enable the shoe manufacturer to make two-tone shoes, which are restricted only when soles are of leather or rubber.

It would be difficult to predict the outcome of the sole leather situation, but the present scramble is interesting to say the least.



★ ★ ★ ★ ★ ★ **LEATHER KNIVES**

A group of Hardy quality knives for the shoe and leather industries. In this field we cover every requirement including double and single bevel splitters, counter skiving knives for fibre board, monarch knives, and leather skiving knives.

End views of the knives shown above illustrate the common types of single and double bevels.

These knives are made in both the high speed steel and carbon tool steels, hardened by experts to give the maximum service. Variations in the quality of leather and the composition of fibre board require knives that adapt themselves readily to these changes and continue to give excellent cutting results.

THE L. HARDY COMPANY
17 MILL ST., WORCESTER, MASS.

Work Shoes . . .

(Continued from page 14)

This application of the term "linings" was rather loose but quite common in the trade.

The specifications for quarterlinings were prepared on a basis of the consensus of foot health authorities, manufacturers, retailers, and consumers. Foot health authorities generally favored fabric quarterlinings as providing more porosity for the shoe upper and eliminating interference with the normal stretch and elasticity of the leather; shoe manufacturers and retailers generally preferred leather or coated fabrics for quarterlinings because of the smooth surface against the foot provided by these materials, and the generally better appearance of the inside of the shoe. Most of the consumers questioned didn't give much thought to the linings.

Strictly speaking, the complete lining of a shoe is composed of numerous parts, the number of which varies according to the type and construction of the shoe, as well as its grade and quality. The lining specification for work shoes has, therefore, been revised tentatively to include specifications for all of the principal lining parts. Not all women's work shoes will contain all of these parts, nor will all shoes follow the same plan of lining division.

The tentative specification for linings, as amended, is as follows:

Amended Specifications For All Lining Parts

Linings—(a). General—All lining parts must be of good quality to provide proper service under the conditions of wear to which work shoes are subjected. They should be smooth with few seams and no wrinkles. They should provide maximum porosity without loss of strength and should not be unduly affected by excessive perspiration which may be found in work shoes after relatively limited periods of wear. Materials selected for work shoe linings should be carefully tested for tensile strength, burst resistance, resistance to perspiration, resistance to cracking and wrinkling, porosity, and elasticity without abnormal stretch. Bulkiness is a factor to be avoided.

(b).—Between Lining: An interlining of drill or twill placed between the outside of the upper and the quarter lining, especially in five eyelet oxfords and similar patterns, will reinforce the upper and will help hold the upper shape through extended wear.

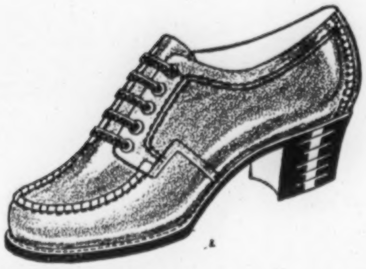
(c).—Counter Pocket: The counter pocket in an unlined shoe should be good quality leather that will hold the counter firmly in position, will not tear, and is so attached that it will not chafe the foot.

(d).—Doubler: The use of doublers in women's work shoes, to secure additional plumpness in the forepart of the shoe, and to increase the shape holding qualities of the forepart, is recommended for women's work oxfords. Flannel and cotton nap doublers are recommended for unperforated shoes; artificial leather or coated fabrics for perforated shoes. Drill and sheeting doublers are acceptable. Paper and paper backed fabrics are unacceptable.

(e).—Heel Pad: A cushion pad, made with an underlay of felt or similar material, is recommended for extra comfort and protection against chafing and irritation of the bottom of the heel. Leather, artificial leather, or coated fabric pads are acceptable. Paper pads are unacceptable.

(f).—Heel Stay: The heel stay should be made of medium weight leather of good strength, inserted with the flesh side of the leather coming against the foot, and having no seams or ridges that will chafe the foot.

(g).—Quarterlining: Should conform closely to all the requirements for linings in general. Some foot health authorities believe leather linings are undesirable because two pieces of leather with flesh side together limit the porosity of both pieces and prevents the normal stretch and elasticity of the leather. They hold that unlined shoes also may be undesirable because the flesh side causes stocking drag when the feet become warm or moist; this was evidenced by a test made among 450 women workers in 16 laundry plants. These authorities favor a cotton drill or twill fabric quarterlining for all work shoes. Other authorities prefer for general work wear a shoe with a soft, porous leather quarterlining, with plain or coated fabrics deemed acceptable. For high boots, cotton drill or twill, faced with leather or artificial leather at the top and sides, is recommended. Artificial leather and coated fabrics are acceptable for quarterlinings of low shoes provided they meet fully the requirements outlined in the general lining specification.



A smart safety shoe for women workers, this model made by the Gale Shoe Mfg. Co., North Adams, Mass., is finding quick acceptance in a lot of war plants. It has a safety box toe and other features which are described in the accompanying article.

(h).—Skeleton Lining: If a fabric quarterlining is used for oxfords a skeleton leather lining to reinforce the edges is preferable.

(i).—Socklining: Any leather, artificial leather, or coated fabric having good wearing qualities is acceptable. Paper linings are unacceptable. Cushion linings are recommended if added protection against foot chafing is desired. It is extremely important that wrinkles and poorly adhered socklinings be avoided.

(j).—Tongue Lining: Leather, artificial leather, and soft fabrics, drill, or twill acceptable. Most coated fabrics are not acceptable because they are not soft and flexible enough for the purpose, or crack easily. Bulky tongue linings should be avoided.

(k).—Vamp Lining: Cotton drill or twill are preferred for unperforated work shoes; leather, artificial leather, or coated fabrics are recommended for perforated shoes, but these must conform fully to the requirements specified for linings in general.

Editor's Note—Another article on women's work shoes will be published in the "Shoe Factory" section of the Feb. 6 issue, and will describe other new types of footwear being developed especially for women's work wear, and new promotion and educational work being done to popularize these shoes among working women.

For a
Happy New Year

BUY
WAR
BONDS

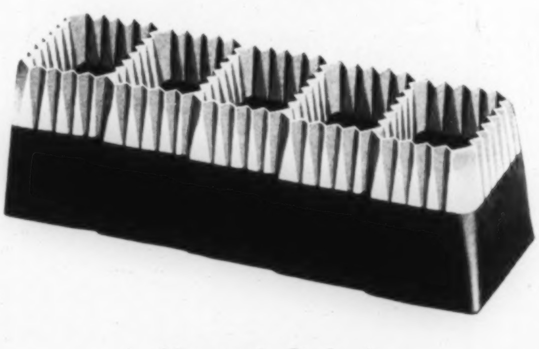
HOWES BROS. CO.
SOLE LEATHER
Howes
AT ITS BEST
TANNERS CUT SOLE CO

SHARP EDGE CUTTING DIES

also

TOOLS and DIES
JIGS and FIXTURES

Machine Parts and Small
Special Machinery



38 years in St. Louis.

QUICK CAREFUL ATTENTION TO DEFENSE OR CIVILIAN ORDERS AND INQUIRIES.

INDEPENDENT DIE & SUPPLY CO.

La Salle Near Jefferson St. Louis, Mo.

NEW SHOE DESIGNS

(Shoe designs furnished by Z. H. Polachek, 1234 Broadway, New York, N. Y.)

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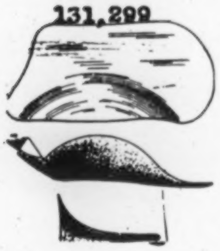

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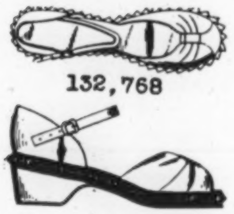

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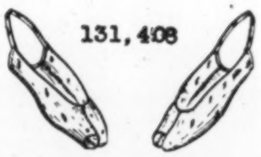

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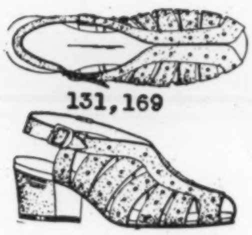

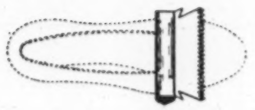

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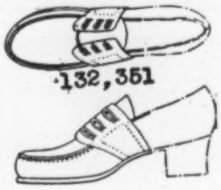

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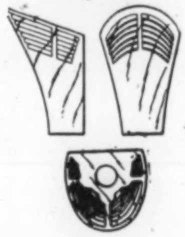

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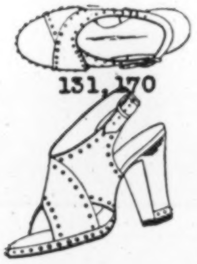

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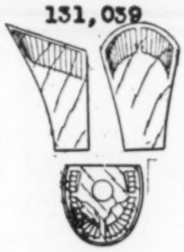

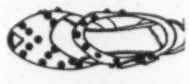

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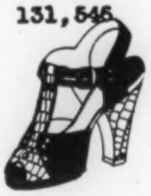

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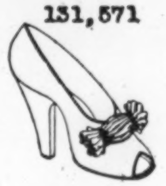

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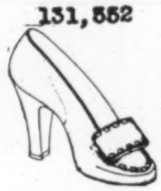

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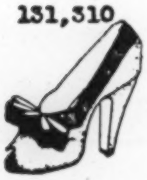

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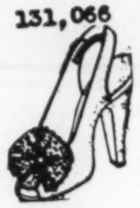

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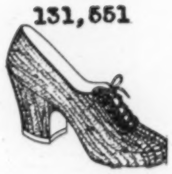

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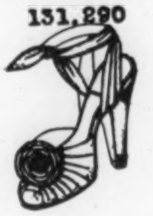

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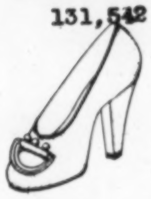

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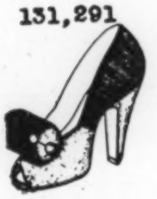

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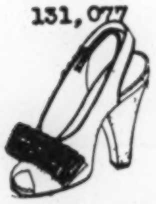

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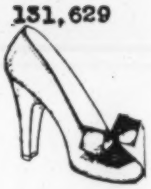

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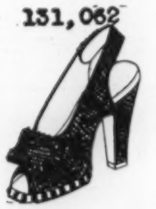

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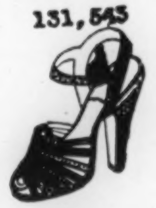

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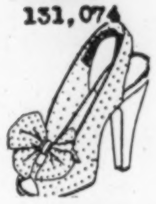

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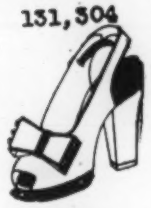

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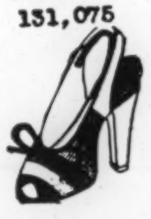

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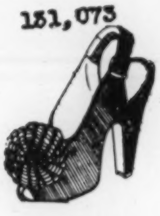

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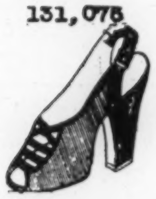

131,039. John Bolten, Andover, Mass., and Robert H. Goldbaum, Plaistow, N. H.

131,062. Mabel Julianelli, New York, N. Y.

131,066. Mabel Julianelli, New York, N. Y.

131,074. Roger Vivier, New York, N. Y.
131,075. Roger Vivier, New York, N. Y.
131,076. Roger Vivier, New York, N. Y.
131,077. Roger Vivier, New York, N. Y.
131,169. Morris Wolock, N. Y., N. Y.
131,170. Morris Wolock, New York, N. Y.
131,290. Roger Vivier, New York, N. Y.
131,291. Roger Vivier, New York, N. Y.
131,299. Irwin Herskovitz, New York, N. Y.
131,304. Julius Pen, New York, N. Y.
131,310. Harry Le Roy Sutcliffe, New York, N. Y.
131,408. Jean Harms, Clayton, Mo.
131,542. Roger Vivier, New York, N. Y.
131,543. Roger Vivier, New York, N. Y.
131,546. Roger Vivier, New York, N. Y.
131,551. Mabel Julianelli and Charles A. Julianelli, New York, N. Y.
131,552. Mabel Julianelli and Charles A. Julianelli, New York, N. Y.
131,571. Roger Vivier, New York, N. Y.
131,629. Mabel Julianelli and Charles A. Julianelli, New York, N. Y.
132,351. Richard P. Boothby, Auburn, Maine, assignor to Air-Tred Shoes, Inc., Auburn, Maine.
132,768. Hyman E. Zackon, Montreal, Quebec, Canada.

SHOE FACTORY

Long Neglected Women's Work Shoes Now Becoming "High Style"

A NEW "high style" type of footwear is coming to the forefront in the women's shoe field—the long neglected and sorely needed women's work shoe. Evidence of increasing recognition of the importance of specially designed, well constructed, and suitably identified work shoes for women is found on every hand. Manufacturers are interested and some are producing work shoes; foot health authorities are seeing some of their dreams of foot health among women workers come true; stylists no longer give work shoe models a broad snub; retailers are selling available work shoes; employers are urging their workers to dress their feet properly, and in some instances are insisting that they do so; consumer groups and Government agencies are squarely behind the promotion of proper work shoes; and as for working women—they are coming into their own for the first time in footwear history.

All of which is encouraging *but working women still constitute the most improperly shod group in America* when they are on the job, and women's work shoes still constitute the largest neglected type of footwear in the country. Much has been accomplished since HIDE AND LEATHER AND SHOES first smashed through the barriers of tradition and prejudice and asked why there is no distinction made between dress and work types in planning, making, and classifying women's shoes.

In the course of its thorough study of the need for women's work shoes, HIDE AND LEATHER AND SHOES has conclusively proved that a large potential market exists, that it is generally unserved, that it is receptive, and that cultivation of the market through the development and promotion of proper types of women's work shoes has the enthusiastic appreciation and support of influential consumer leaders, powerful consumer organizations, and Government war and home economics officials.

In the course of this study, hundreds of shoemen were personally interviewed; thousands of working women told what kind of shoes they wanted for wear on the job and what they would pay for them; Government and consumer leaders cooperated in many ways; foot health authorities analyzed the relationships between good work shoes and good foot health for working women; safety and personnel executives reported on safety and efficiency factors entering into the women's work shoe discussion; and some employers related their experiences in the selection of suitable footwear for their workers.

In the preceding article (H&L&S, Nov. 7) the basic specifications for proper women's work shoes were considered and some comments of shoe and foot health authorities were reported. The same issue contained detailed tentative specifications for basic women's work shoes suitable for wear under ordinary occupational conditions in factories and stores where no special condition or hazard of employment exists, including basic requirements of footwear for agricultural workers.

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Basic Specifications

The specifications were prepared as a basis for further planning as they specified details of badly needed functional footwear, more important now than ever as an aid to the war production program yet requiring no excessive use of vital war materials and no use of leathers and other materials needed for military purposes. At the same time, it was intended that the specifications would cover footwear that could be promoted after the war as a profitable staple item.

Seventh of a Series by

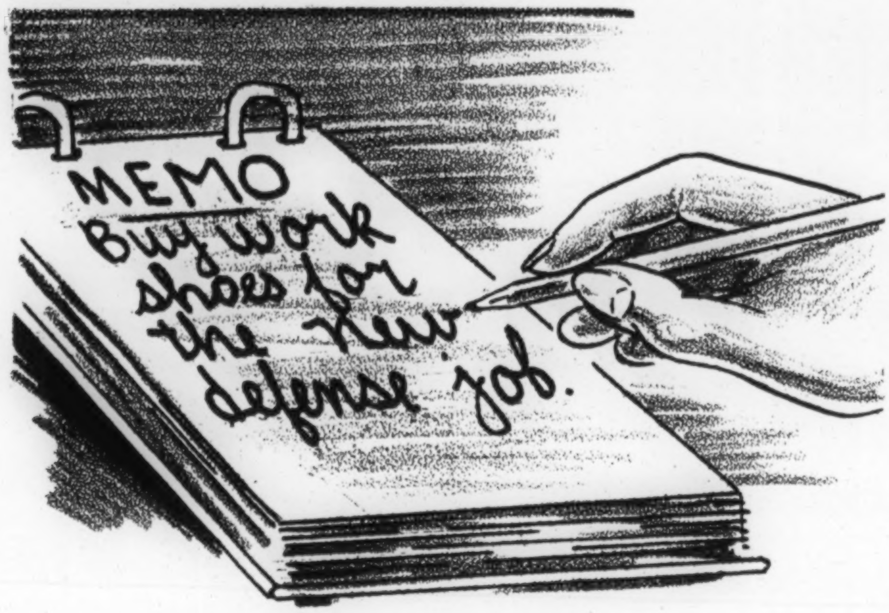
Alfred Henderson

Reporting HIDE AND LEATHER AND SHOES' study of women's work shoes

Specifications were set forth for construction, lasts, patterns, upper materials, soles, heels, shanks, arches, special features, counters, box toes, linings, insoles, modifications for special conditions, farm shoes, and general recommendations.

It should be explained that these specifications were offered only as basic. Modifications and revisions are necessary to meet the requirements of varied occupational conditions. However, it is believed that the outline constituted the first definite set of specifications for shoes designed purposely for wear by working women that had ever been published, and as such it constitutes a definite basic plan for action.

That acceptable standards for women's work shoes are badly needed is well recognized by those who are


MEMO
Buy work shoes for the New defense job.

concerned with footwear requirements under wartime conditions and with general considerations of good foot health. How important such standards may be is easily understood when it is realized that increasing tightening up of leather supplies and expanding needs for leather for the armed forces makes it imperative that functional footwear be given more attention if civilians are to be properly shod throughout the war without depleting supplies of leather needed for military uses. It is for this reason, primarily, that the Office of Price Administration and the War Production Board are working with the American Standards Assn. to develop good standards for this sort of footwear.

Further emphasis on the needs of better standards for women's work shoes was also found at the National Shoe Fair, a few weeks ago. In an editorial commenting on fake work shoes, HIDE AND LEATHER AND SHOES observed then (H&L&S, Nov. 7) that "many leading makers of women's shoes were frankly featuring 'women's work shoes' and calling them by their proper name. Others were suggesting various types of shoes for women workers. The shoes were of many distinct types and styles, most of them basically suitable for working women. . . . At the same time it is also evident that some manufacturers intend to cash in on the increasing demand for women's work shoes without making any effort whatever to properly serve the footwear needs of working women. . . . Some of the footwear that has been offered for sale under the guise of being work footwear has been so lacking in any merit whatever for the purpose that it can be expected to ruin the feet of any working woman who can be hoodwinked into purchasing it; will endanger their safety and lower their efficiency on the job; and will impede the progress of work shoe development in the women's field."

This, then, explains why specifications for basic work shoes for women are necessary and the reason for the following discussion based upon the opinions of various manufacturing and foot health authorities.

"Very Good", Says General Shoe Official

"We feel that the specifications that you have laid out for these shoes are very good," commented H. T. Butler of the General Shoe Corp., Nashville, Tenn. "We can't help but feel that the work you are doing along this line will prove very helpful if and when the Government makes Order M-217 more severe," he added.

General Shoe Corp. has recently issued a mailing piece on women's sport type shoes in which are depicted several that are excellent or good work shoes for general wear, and combine functional characteristics of good work shoes together with good styling and attractive appearance.

C. W. Mathieson, of the International Shoe Co., St. Louis, said he "feels that considerable study has gone into these specifications and there is but one suggestion we would make in the specifications and that is to eliminate coated fabrics for linings. Coated fabrics definitely limit porosity of a shoe, which is detrimental to foot health." (Coated fabrics were specified as "acceptable"—Ed.)

Mr. Mathieson said further:

International Shoe Co. Stylist Notes New Trend

"Much good should result from the effort you are putting forth to standardize women's work shoes. We have noticed for a number of years the trend towards low heel shoes. Two or three years ago this trend was very pronounced in colorful flat heel playshoes. Many a woman, accustomed to high heel dress shoes, found herself buying a pair of these typical low heel playshoes. The transition from high heels to extremely low heels was too great, with resulting discomfort.

"As a result, retailers and manufacturers sensed a demand for play type shoes on a slightly higher heel. Also there developed a demand for more serviceable type leathers and fabrics and this ushered in the casual shoes as described, coupled with service type welt shoes for women engaged in war work."

A. Owen Penney, DSC, editor of *Mid-Atlantic Annals*, official publication of the Mid-Atlantic Zone, National Assn. of Chiropodists, agreed "almost 100 per cent" with the tentative specifications, and added "so far as the *need* for such shoes is concerned I am in *complete* agreement."

Dr. Penney said: "For 45 years I have struggled to get women into shoes of the type you describe. We know that improper, that is, inappropriate shoes lead to foot ailments, cause accidents, lowered efficiency and morale, and often large sums paid out in workmen's compensation. Correct shoes will eliminate an appreciable percentage of this loss.

Dr. Penny Says Oxfords Are Best

"The one type of shoes I do not approve among those you have suggested is the 'loafer.' I am for the five eyelet oxford always for work as being the only type that will give adequate support and control." (Five eyelet oxfords were among those specified as "most desirable." "Loafers" were not specified but were discussed as being favored by some working women—Ed.)

"There is a lot of consumer resistance to overcome in this sort of a campaign, for many women cling to their high heels and pumps in the current novelties. This is seen more in department stores and offices than in factories, laundries, etc. But employers have the same right to demand a certain type of shoe as they have to stipulate a certain kind of dress or uniform, and they will do so as they learn to feel that 'foot ills' increase the overhead."

Interest in footwear worn by employes is rapidly increasing and many plants do stipulate the types of shoes that must be worn by workers. These are mostly, however, firms making war materials with special occupational hazards of fire, explosion, etc., existing. Other employers recommend the wearing of suitable work shoes and have educational literature and posters in the factories stressing the need for good work shoes.

Republic Aviation Corp. Recommends Work Footwear

Among this latter group of employers is the Republic Aviation Corp., Farmingdale, Long Island, N. Y. This company gives all new female production employes a mimeographed form which includes general instructions on clothing to be worn at their jobs. The instructions state:

"Sturdy shoes with broad heels not more than 1½ inches high should be worn. Rubber heel tips and stiff toe boxes are recommended. Open toes, open heels, and sandal types are not permitted." Miss Lois L. Ferris of the company's personnel department says that, in addition to advising its employes, the company has arranged for a local merchant to carry safety shoes for women made by two large manufacturers, and she reports:

"A number of pairs of both brands are in use in the factory and our report to date has been entirely satisfactory. There are no special hazards to which women in our plant are subjected which would require any factor not incorporated in these shoes. We do feel that the support afforded by the 1¼ inch heels is valuable in an industry where workers are on their feet as much as they are in here. Models of both these shoes are on display in the induction room and all new female employes are given advice on proper shoes and proper support of feet at their induction meeting."

On the subject of employer cooperation in securing proper work shoes for their employes, a Boston shoeman observed:

"Many firms pay for smocks and other uniforms for their female workers and these uniforms add very little, if any, efficiency to the worker. But proper shoes might very well add greatly to the efficiency of the worker. Consequently, it would seem profitable for firms to buy shoes rather than (or as well as) uniforms. The girls in one large candy factory I recently visited have attractive cream color house dress type uniforms with apple green piping—but their shoes were the familiar collection of castoffs or regular dress shoes."

Dr. C. F. Schmidtmann, secretary-treasurer of the Foot Health Foundation, Omaha, Neb., writes:

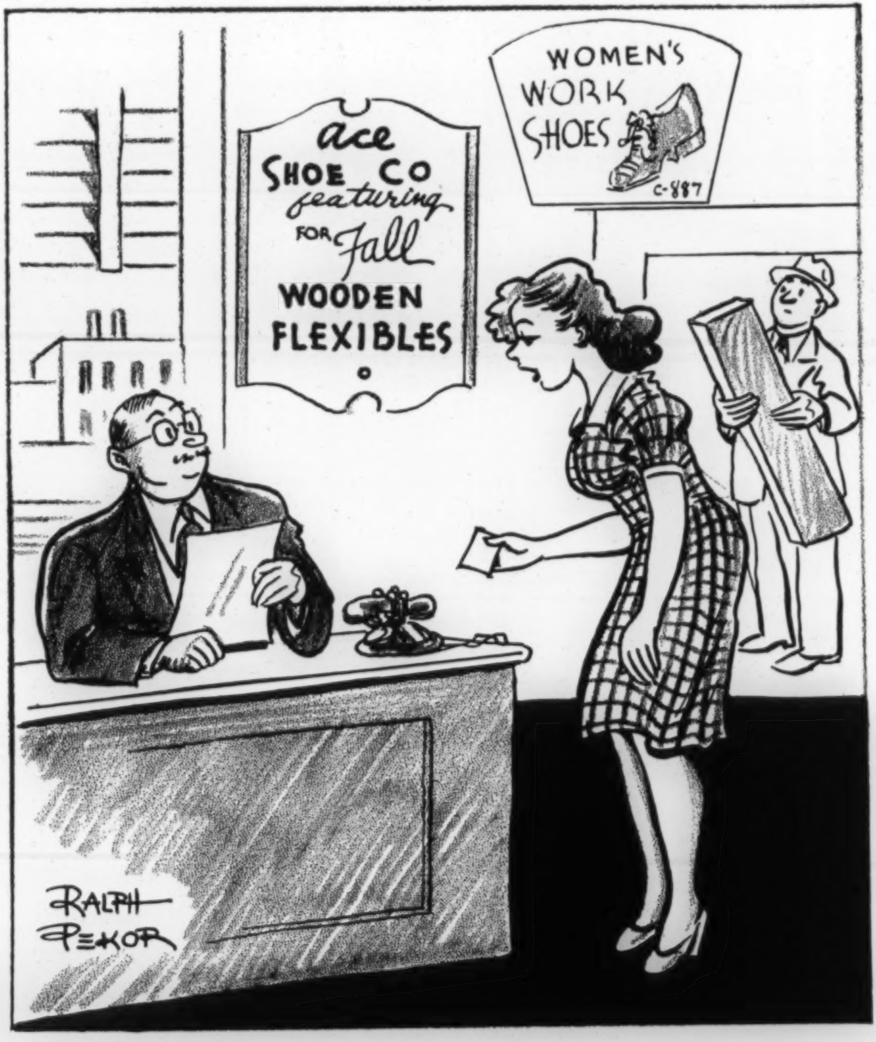
"Our past research has revealed that much fatigue and inefficiency is brought about by improper footgear of the workers. We now find many girls wearing boys' shoes, and as you know fit and widths are hard to find. The end result is that foot 'conditions' are on the upswing. You are doing a noble work in attempting to solve some of the problems confronting us today."

Dr. Schmidtmann Reports on Foot Conditions

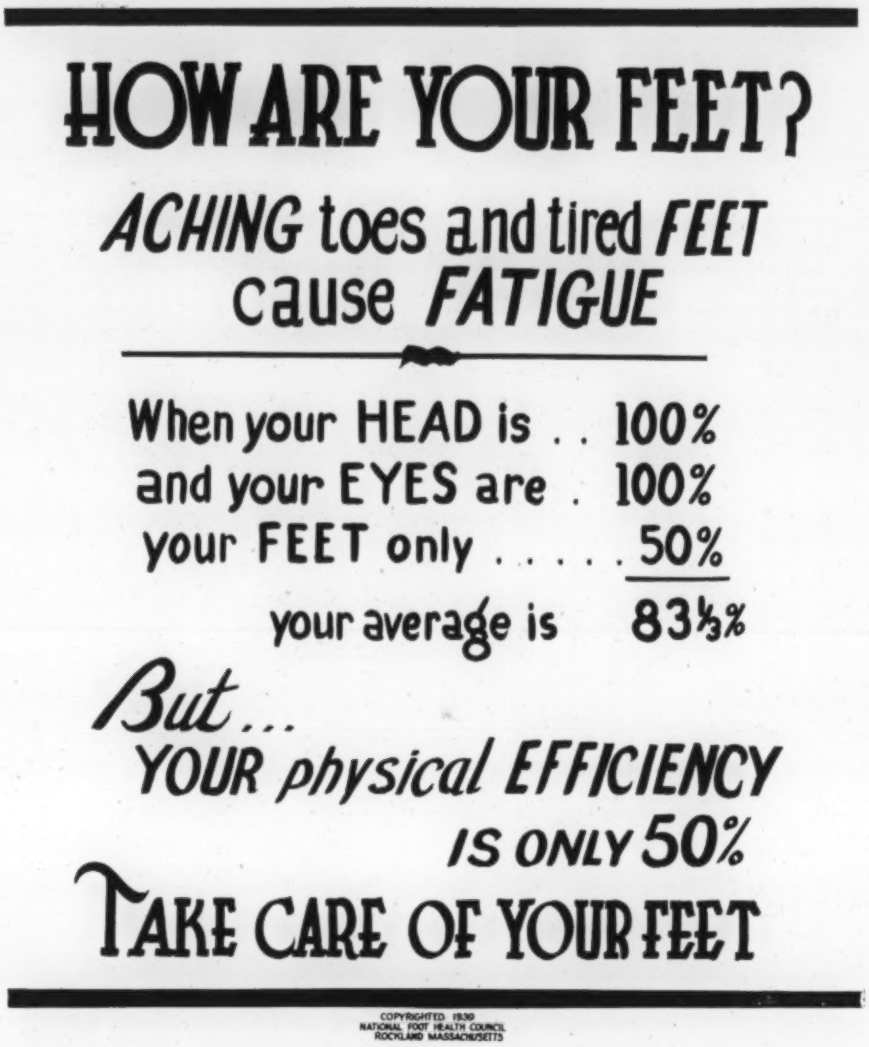
In a recent paper on Podiatry in Industry, Dr. Schmidtmann said: "Many avoidable occupational conditions exist, examples of the individuals so affected are: salespeople, letter carriers, school teachers, policemen, lathe men, waiters, file clerks, and punch machine men, whose feet are subjected to the most gruelling conditions, since it is expected that in most instances they have what may be termed a better dressed foot. . . . In group examinations, it is found that many of these conditions have not been considered severe enough to report to the infirmary, clinic, sick call, or physician. Yet they are the beginning of faulty posture and are the cause or etiology of a multitude of chronic conditions.

"Some of the more common are: Backache, joint and foot strain, intestinal stasis, auto intoxication, impaired circulation, pelvic congestion, muscle spasm, scoliosis, lordosis, prolapsis of the uterus and ovaries, faulty gait, retroflexion or retroversion of the uterus, all of which would have more or less effect on the general efficiency of the individual.

"Industry would profit decidedly if workers could be educated or requested to have periodic foot exam-



"He's a lumber salesman. Wants to show you some samples for spring footwear . . ."



HOW ARE YOUR FEET?

ACHING toes and tired FEET
cause FATIGUE

When your HEAD is . . 100%
and your EYES are . 100%
your FEET only 50%
your average is 83⅓%

But . . .
YOUR physical EFFICIENCY
IS ONLY 50%

TAKE CARE OF YOUR FEET

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NATIONAL FOOT HEALTH COUNCIL
ROCKLAND MASSACHUSETTS

Bulletin prepared by the National Foot Health Council for display in factories, stores, and other places of employment stresses results of foot fatigue caused by wearing improper shoes . . .

inations by a competent podiatrist, just as strict attention is given to the teeth, eyes, heart and lungs, and where indicated, proper treatment should be instituted."

Dr. Schmidtmann listed 84 specific conditions which were found in the examination of 5,200 workers, conditions which were severe enough to command attention and cause loss of time.

"Can't Make Utility Shoes Out of Scrap"

One manufacturer who has made a particular study of women's work shoes for a considerable period of time is Restful Shoes, Jamaica, N. Y. S. P. Reading of this firm says that for the past 10 years "utility shoes" have been the company's specialty. He says: "You cannot make utility shoes out of scraps or the sweepings from the factory floor. The insole, the most important part of the shoe, should be made from the full grain of the leather, not split in two. The tannage should be white oak or gambier, tanned properly, washed or curried, the surface hand buffed, and the under surface channeled for welt construction.

"The last can be made to accommodate most feet, such as the army last, this having very good heel positioning.

"The upper stock is a matter of choice. Either kid, calf, split calf, or crushed kid may be used. My choice would be crushed kid with a full kid lining, one piece vamp with imitation apron punching through the vamp and lining. A blucher pattern is best but a bal is also needed for the slim foot because the latter can be lasted into the whipped part of the waist of the last. The quarter pattern must be right and left. When you have a high inside quarter pattern that is cut fairly straight across the top, you will have the pull line from the top eyelet around the top of the shoe. If the inside quarter has a dip in the top, as the outside has for under the ankle, you will have pressure on top of the instep and the quarter will often bulge out like an umbrella around the top. An extra eyelet back of the top gives an extra pull through the heel providing the wearer is shown how to lace into this extra eyelet. In doing this, you must skip the top eyelet, going to the extra eyelet and then back to the top one, keeping the loops under the ends.

"The combination of kid lining and perforations make for more comfort. But the lining pattern must be cut different from the outside upper pattern. The seams in the linings must not line up with the upper seams as this causes too much thickness at the seams. There should be no seams that will cause pressure.

"Of course soles at least 8 irons, stitched aloft, give good wear and cushion the feet. Solid sole leather counters do not break down readily. All leather heels give best service and support. These heels should be positioned to line up with the outside edge of the toplift in a straight line with the outside ball. This prevents the counters running over on the outside. The heel should be 13/8 high and fairly broad."

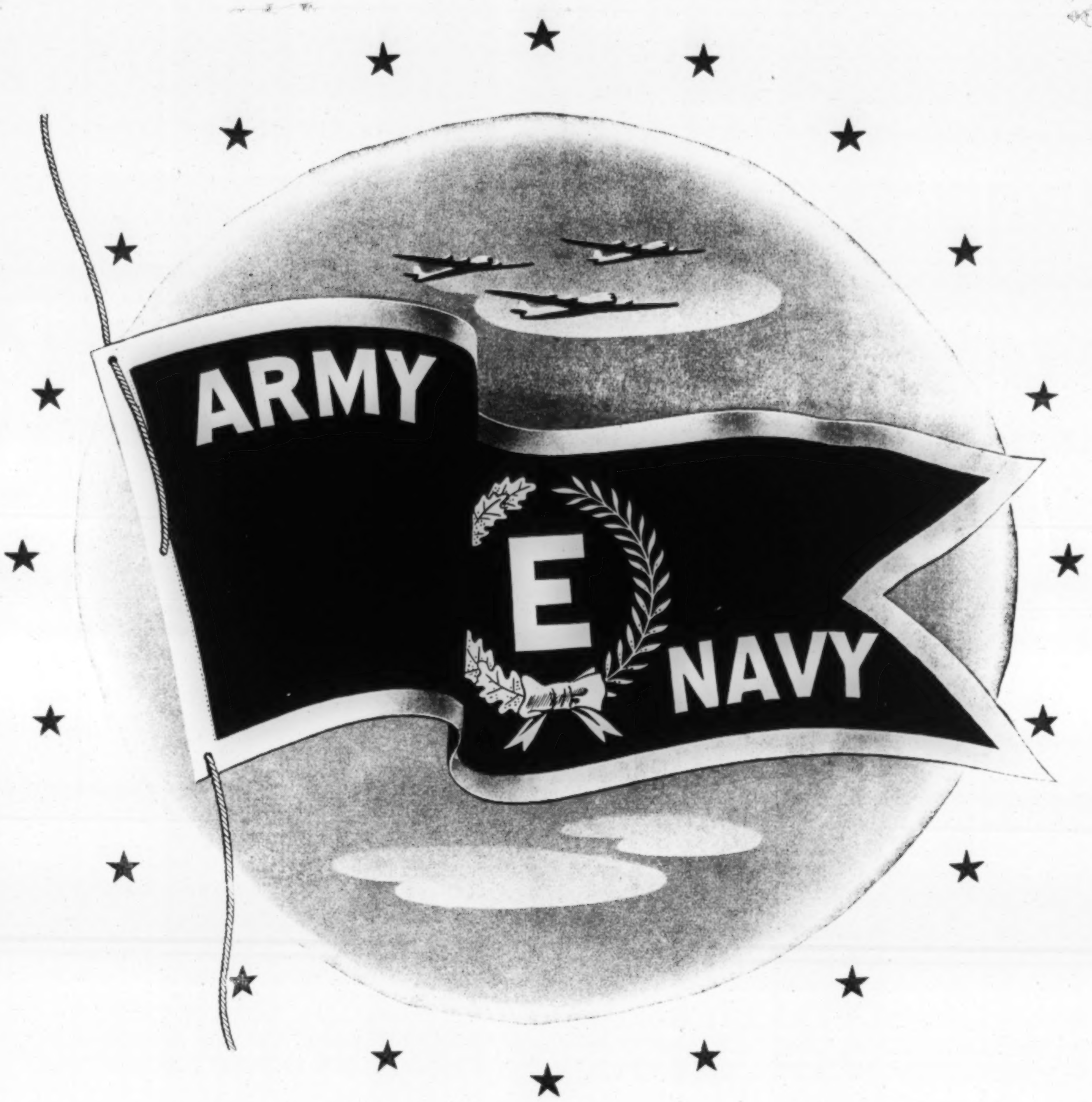
Dr. Smith Says Survey Is Needed

Dr. Louis L. Smith, chiropodist with the May Co., Cleveland, O., observes: "You have embarked on a great subject with many problems. I read with interest the basic specifications for women's work shoes and think it covers much of the subject. However, regarding shoe lasts, may I add my observations?

"The care and study that is given to leather, shanks, linings, counters, etc., should be extended to the study of feet and lasts. This is important because no shoe can be comfortable unless it is in the shape of the foot on which it is to be worn.

"I think it is somebody's job to make a survey of say 5,000 feet, chart their shape, and then make lasts that will fit the individual foot types. I know many soldiers and sailors are well fitted for size and width, but little thought is given to the shape and type of their feet. If this was done they could not be properly fitted because there wouldn't be the style shoe available to fit their feet properly.

"I do not suggest that last makers should develop special lasts for every individual foot, but the lasts should be made to properly fit the majority of feet. It has been said that 80 per cent are being fitting into inflange shoes but that 90 per cent of feet are



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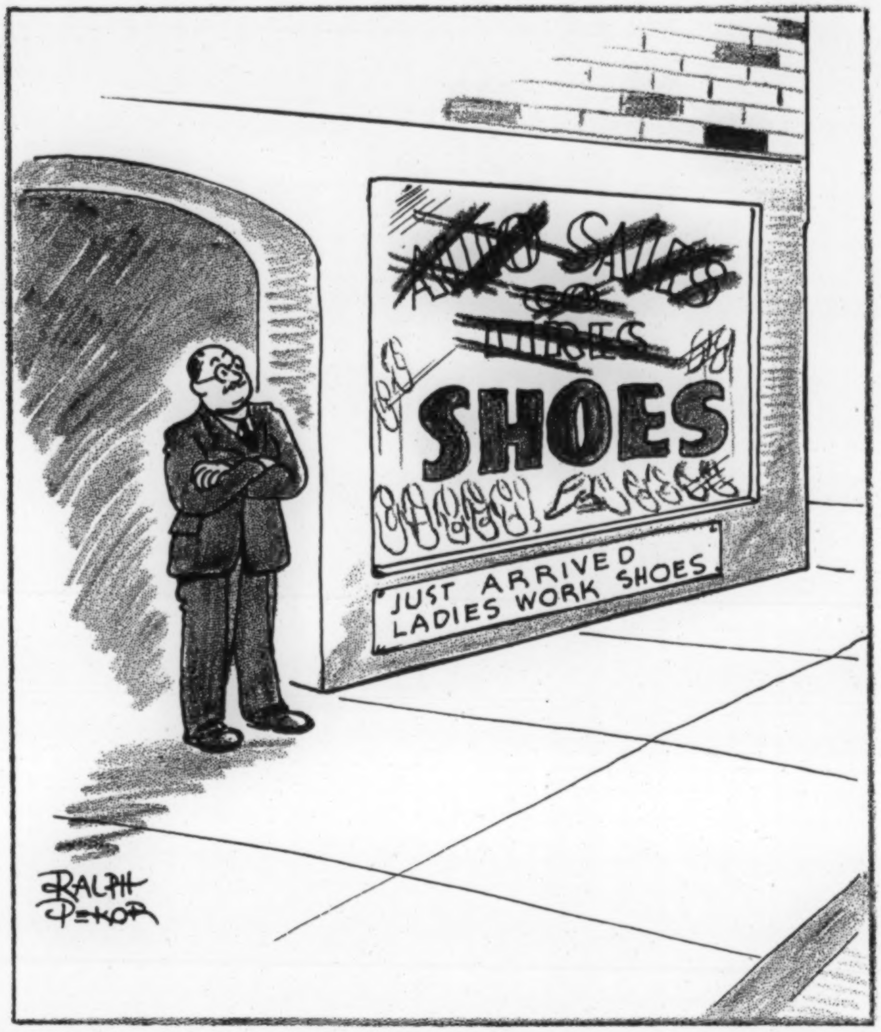

Converted to war service . . .

outflange—so you can see where the lasts come in.

"Another point: Women working in plants where steel particles are always falling to the floor should wear high shoes. They usually wear low shoes now and I have found many particles of steel in the skin of the feet of these workers; in the soles of their feet, between the toes, and around the ankles. Now a high shoe with a bellows tongue would offer much better protection, and as most of these workers wear slacks on the job the protection offered by the combination of high shoes and slacks would be practically 100 per cent complete."

Strong Box Toe Is Recommended

Another foot specialist says that women's work shoes should almost always have a strong, protective box toe. Although safety box toes are commonly considered only when the wearer is working where there is danger of injury from heavy objects, he asserts that if the workers handle objects weighing one-half pound or more the box toes should be made of steel. He demonstrated his point by dropping from a height of a couple of feet on some molded box toes an object weighing about one-half pound, and even the firmest of the toes collapsed entirely. He pointed out that such objects would usually be dropped from a table or bench and that the impact would be considerably greater than in his demonstration.

Commenting at length on the tentative specifications and the requirements of good work shoes for women, William A. Rossi, foot health authority and writer, declares that in every industrial job today hazards exist, and one of the primary conditions upon which women's work shoes should be designed and constructed is to counteract occupational hazards. This factor must not be minimized, he stressed, continuing:

"The phrase, 'proper foot support' is almost as old as the shoe industry. It is used in the vague sense along with a commercial tang. Such generalities must be avoided, for it is one of the chief crimes of the industry. We must be more specific in answer to the following: (1) Where should the foot be supported? (2) How should the foot be supported? (3) How much support is needed? (4) Should all feet receive the same support? (5) What, exactly, do we mean by 'support'?

"Unless the industry makes an honest scientific endeavor to uncover the answers to the above and other relevant questions, women's work shoes are going to be exploited with the hackneyed commercialism of many of the 'health' shoes of the past and present. This is not a fair deal to the consumers and to the shoemen who are sincere about this new type of footwear. It will leave a smirch on the industry's attempts to put this shoe across with the women industrial workers.

Rossi Says Last Is Most Important

"There is absolutely no factor in the women's work shoe, or any type of shoe for that matter, that rates in importance with the last. This is the weakest link in the whole industry, and unless a serious and scientific endeavor is made to correct it, there will still be a large percentage of these shoes (as with all) that fail to give the satisfaction in fit, comfort, wear, etc., that should be obtained for the price paid. Following are some comments:

"How can the consumer be assured of a proper fit in *all* parts of the foot when we have no accurate standards for proportional measurements of women's feet? No accurate survey has been made to compile such standards. Until the industry (not individual manufacturers) does something specific in this direction we shall be forced to continue with the same catch-as-catch-can methods of determining last measurements and proportions in conformity to the foot.

"We cannot substitute present lasts (growing girls, nurse's, sport oxfords, orthopedic, or corrective) for women's work shoes. A distinctly new last must be devised, incorporating the best features of present lasts and adding the features necessary to work shoes.

"Best is the round toe last, with fullness of box. Square toe and walled lasts are excellent from the foot-welfare viewpoint — better, perhaps, than any other last yet designed. These press the least on the inner or outer side of the toes and foot, giving ample room for motion and expansion. In the writer's opinion the walled last is almost a *must* for women's work shoes.

"These shoes should be built on a *flat bottom last,* with as little spring as possible. This has a far greater foot comfort and health value than is suspected by the industry. It is a major aid in reducing fatigue, burning feet and discomfort in standing or walking, and greatly increases general foot efficiency. The curved-bottom last (most lasts are on this plan) opposes foot comfort and efficiency.

"There is a tremendous need for *new last and foot measurement standards.* Despite everything and anything that the industry does to overcome its other problems, it cannot take the all-out progressive step until these new standards are compiled. This rates Number One on the 'to be done' list. If consumer returns of footwear for unsatisfactory fit, wear, and comfort are to be reduced, a whole new program of last standards—based on a national foot survey—must be carried out. Otherwise the industry will continue to hit the stone wall so familiar to its members. There is no magic road or short cut to this goal.

"Simplicity is the pattern keynote, with the four eyelet oxford the best we have so far. Soft, porous, calf leather is the best upper material from the combined standpoint of durability and sanitation. Medium or light weight soles are satisfactory. But *never* heavy weight. Unless flexibility is maintained the foot efficiency of the worker will be sharply reduced. Nimbleness of foot is a prime essential as a precaution against the existing hazards in industrial work. Except for work in damp places, rubber soles are undesirable. It is far better to use a thinner, better quality sole than a thick, poor or fair quality sole.

"The built-up leather heel is best. Never higher than a 12/8, and preferably an 8/8. One of the major industrial hazards among women workers is heel heights; not necessarily high heels, but even Cubans and military (12/8 to 17/8). There can be no compromise in regard to heels on these shoes. Either they be made with the 12/8 or lower or it is better that the shoe not be made at all. These higher heels are directly placing a hazard on the woman's foot—a hazard that may mean her life or loss of limb.

"A broad shank, well tempered to allow for flexibility (an actual spring), is satisfactory. But a very neglected fact about shanks is their lack of contour to conform to the foot, transversely and longitudinally. An equal (if not greater) share of the fault lies with the contours of the last in this section. Here again is an illustration of poor standardization of last measurements and shapes to conform with those of the foot. Present and past generalizations (guess work) have proved inaccurate and inadequate. Moreover, there should be a closer cooperation between the last maker and shank maker. Their ideas should conform, rather than having one side make the original design (whether shank or last) and have the other side conform its product to the first. This again is compromise—and the consumer does not always come out with a proper fit. *Any* kind of support can be damaging. The shank support should be correct—correct in flexibility, contour and shape to conform to the foot and *types* of feet, and also to foot function.

"If the sole contour of the last is properly designed, there need be no arch support or padding at all in the shoe. Ordinarily, arch paddings in the shoe are nothing more than a compensation for the deficiencies of the sole of the last.

"Outside of the features used for occupational value in industrial footwear (metal toe boxes, etc.), the

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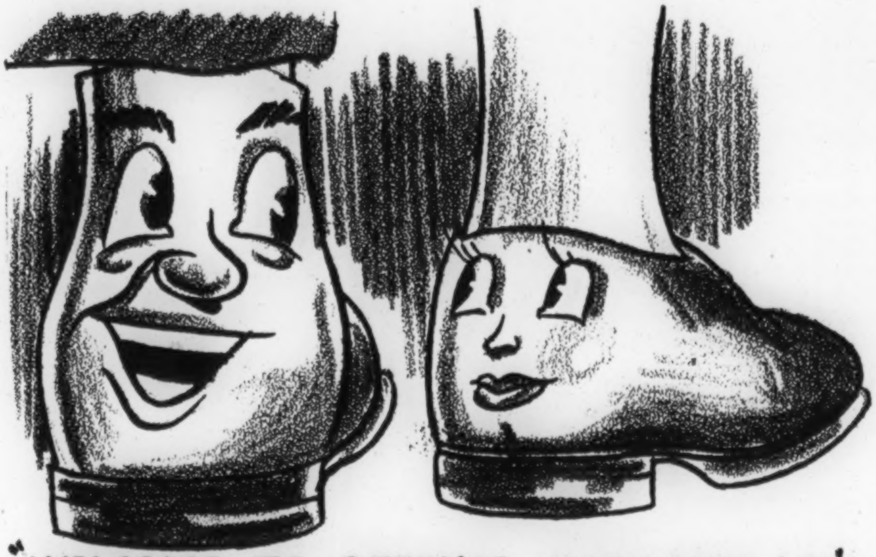

"WELCOME TO DEFENSE WORK, MISS. LET'S STEP OUT, AND DO OUR JOB."

only other feature worth while—in the writer's opinion—is a changeable heel cushion, preferably of sponge rubber. Whereas 50 per cent of the body weight rests upon the heel, whose area is no more than the size of a silver dollar, a buttressing cushion should be inserted here to reduce foot shock in walking and increase foot resiliency in standing. As a general rule, we may say that the more the last conforms to the foot, the less need there is for compensating features aimed at foot comfort and fit.

"An extended inner counter, *not* for support (for the long inner counter offers none to the inner side of the average foot) but for protection against puncture wounds or bruises to which this section of the foot is vulnerable. It might be suggested here that the outer rear section of the counter be reinforced in any kind of footwear used for working or walking purposes.

"Flexible and *porous* leather should be used for the insole. It is important that the quality of leather be good, for it is upon this part that sweat and heat play havoc. Poor quality insoles set up chemical and mechanical irritations to the sole of the foot.

"Whereas it is expected that women industrial workers will willingly pay a good price for a good work shoe, manufacturers should make it an emphatic point not to sacrifice workmanship and quality. The reputation that these initial women's work shoes make will largely determine their future sales potentialities as a staple."

Editor's Note—The eighth article in this series of reports on women's work shoes will be published in the Jan. 2, 1943, issue and will contain additional comment and information on designs, materials, and specifications for suitable work footwear for women. Reports of promotional activities will also be included in the next article.

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The Julian Cementing Machine will cement pieces six inches or less in width V where the right cement is needed.

Being used for cementing welts, veneers, shank pieces, rands, top pieces, canvas and rubber linings, and also for cementing fillers, inner and outer soles.

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SHOE FACTORY

A MONTHLY DEPARTMENT OF HIDE *and* LEATHER *and* SHOES

Upper Leathers by *Greenebaum* Continue to Better the Quality of *Women's Work Shoes*

GREENEBAUM LEATHERS have a high rating for dependability in use and workability in manufacture—consequently lend themselves admirably to the construction of ***WOMEN'S WORK SHOES*** for which there is a constantly growing demand.

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NOVEMBER 7-1942

Basic Specifications for Women's Work Shoes

As ten million American women have been gainfully employed year after year in thousands of different jobs and several more millions were expected to be working at many new jobs in war industries, Hide and Leather and Shoes, many months ago, started an exhaustive study of the potential market for women's work shoes, and of the kind of shoes working women needed. It was known that women who work were generally poorly shod.

In the past there has been no distinction in women's footwear between dress and work types, as in men's shoes, and practically none (except nurses') were specially designed and constructed for the needs of women who work, properly classified and identified for that purpose.

In making this study, Hide and Leather and Shoes questioned hundreds of shoemen, thousands of working women, foot health authorities, stylists, employers, leaders of influential consumer groups, etc.

The study revealed a definite need for suitable work shoes for women; that most working women now wear footwear which is injurious to foot health, uncomfortable, and unsafe; and that working women are willing to buy suitable and properly identified work shoes and to pay for them as much or more as they pay for dress shoes.

Previous installments of this series reported the extent and buying power of the potential market for women's work shoes; pointed out the urgent need for better footwear for working women as a valuable contribution to the war effort; analyzed the possibilities of women's work shoes as a profitable post-war staple; reported the views of leading manufacturers and distributors of women's footwear; revealed the findings of a consumer survey among women in representative types of occupations; and presented a study of the agricultural field and its footwear problems. Included in the earlier articles were enthusiastic expressions of keen interest in the study by Government officials and agencies and leaders of women's organizations.

This study disclosed that one of the chief reasons for the almost universally bad footwear conditions prevailing among employed women was the lack of easy identification of suitable work shoes. Shoemen insisted that women demanded glamor in their shoes, even those for work wear, and they further insisted that women would not accept footwear bearing so commonplace a classification as "work shoes." The women themselves, when questioned by Hide and Leather and Shoes, spiked this tradition and insisted that they wanted work shoes and wanted to have them identified as such. Style factors and fancy names were given only a passing nod by these consumers, and comfort, durability, foot health, and safety were cited as paramount requisites in a work shoe. Shoes worn by women in the average factory reveal also that glamor in shoes is *not* required.

Since this series began, the shoe industry and various publications have abandoned much of the opposition to properly classifying "women's work shoes." The term is now mentioned openly in the best of trade circles where only a few months ago it was whispered, if mentioned at all. The keen interest shown in this study by foremost spokesmen for large groups of working women and by various Government agencies has been largely responsible for the increased acceptance of the very evident fact that women workers are more important now than ever before and that they need proper shoes if they are to work comfortably, safely, and efficiently.

General Outline by Types

The next step is to adopt a general outline of the type of shoes that should be included in a work shoe classification of women's footwear. Before doing so, it is well to reconsider what has been said in an earlier article (H&L&S, Sept. 5):

"It is obvious that the footwear needs of women on one type of job will not be the same as those on an entirely different type of job. It is possible, however, to study the occupational conditions affecting employed women as a whole and to adopt footwear to meet those occupational needs by segregating female employment into a relatively limited number of classifications. For this reason, it is far more important in planning a line of women's work shoes to study the market's need on a basis of *types of occupations* rather than on an industry basis, because occupational requirements vary within industries and at the same time overlap from industry to industry.

"This basis of occupational study was used by Hide and Leather and Shoes in making this (consumer) survey, and the replies were secured from workers engaged in occupations representative of those in which women are engaged in substantial numbers, with a few important exceptions.

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Sixth of a series by

Alfred Henderson

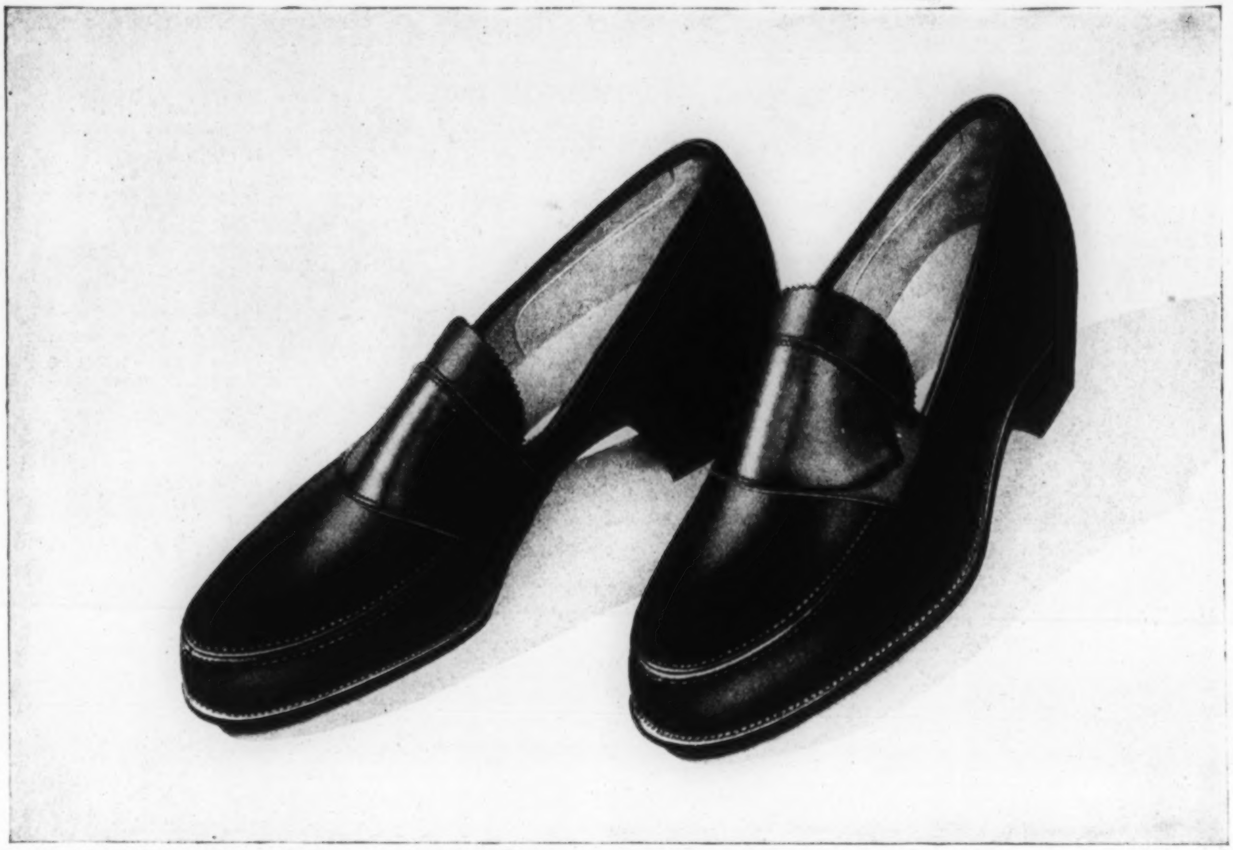
Reporting HIDE AND LEATHER AND SHOES' study of women's work shoes

"Women who are working in unusual fields where their footwear needs are well defined but not typical of the group as a whole were not interviewed. No study was made of consumer opinion in the nursing profession, because this is the one field of employment that has already been provided with specially designed occupational footwear. Nor was any study made among domestic workers, as it is believed that the footwear needs of domestic workers and housewives will be suitably met by creating an appropriate line of work shoes for women employed in industrial and commercial occupations."

Basic Specifications

On the basis of this extensive study, Hide and Leather and Shoes has prepared tentative specifications for basic women's work shoes suitable for wear under ordinary occupational conditions in factories and stores where no special conditions of employment exist. These specifications are published elsewhere in this issue and they warrant careful study by manufacturers and suppliers interested in developing this footwear.

The specifications may be revised or modified in numerous ways to meet special occupational, climatic, and economic conditions in the markets where the shoes are to be promoted. These shoes do not require the use of strategic materials and they do not conflict with Footwear Conservation Order M-217 or other Government regulations affecting the



This Nettleton "loafer" has gained considerable acceptance as an active work shoe, the manufacturer reports. It has a substantial sole and medium height heel, roomy comfort, good fitting qualities, and smart appearance; thus combining many of the salient features of a satisfactory women's work shoe.

Courtesy A. E. Nettleton Co.

industry's wartime operations. On the other hand, they would contribute greatly to the war effort by making available suitable footwear for women workers who are now improperly shod.

Some manufacturers are already making shoes which could be classified and identified as work shoes, with or without some modifications. Others are making lines of footwear that could easily be broadened to include women's work shoes *without clashing with the provisions of M-217*.

Commenting on the inability of women workers to obtain suitable work shoes, Dr. Joseph Lelyveld, chairman of the National Foot Health Council, says:

"The work you have been doing about the classification of women's footwear is commendable both from the standpoint of safety and foot health. There are a great many women desirous of obtaining correct occupational footwear who have heretofore been unable to make a selection from the conventional types of either health, sport, or dress shoes. Work shoes for women will fill a long existent want."

In a letter printed elsewhere in this issue, Miss Hildegarde Fillmore, style and beauty editor of *McCall's* magazine, says:

Two Kinds of Women's Work Shoes

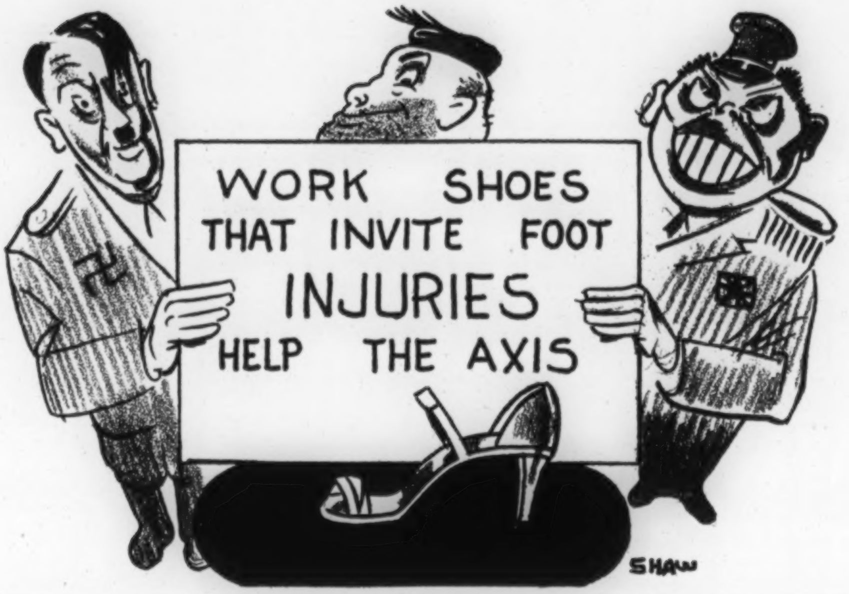
"I believe shoes for women workers should be divided into two groups: (a) Real work shoes, and that includes factory workers, farm workers, women in branches of the armed services who may be asked to do 'dirty work,' etc.; (b) Service shoes, which would include all the sturdy working shoes suitable for every kind of woman worker, from an office worker to a WAAC."

Supplementing the tentative specifications for basic women's work shoes prepared by Hide and Leather and Shoes, the magazine has gathered the opinions of leading shoe designers, manufacturers, foot health and other authorities on the *kind* of shoes most suitable for work wear, and a few of these are reported in the following paragraphs.

Prior to the precipitation of war, demand for women's work shoes was on the incline, according to Harold Browne, president of Browne-Tilt Co., Inc., St. Louis pattern house, and this type was destined to play an important part in shoe designing. Now that the nation is actively enmeshed in world conflict, Mr. Browne says his views have not altered and that there will be an even larger place for work shoes of all kinds; in short, the entire picture of designing will take on a new trend. He also stated that the effects on the novelty shoe factories will be felt in that there will be fewer novelty styled shoes.

Demands Different Than in Previous War

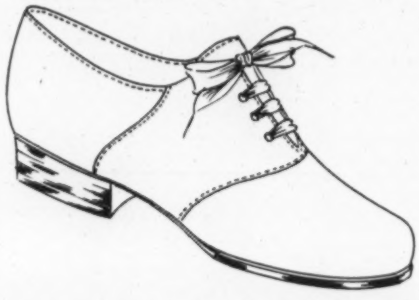
Another designer, whose experience embraces the first World War, points out that since that time women have attained to a higher degree of intelligence in regard to the shoes they wear for work. In addition to this fact, demands of the work women engage in today are very different from those of 25 years ago. In the present war our women are equipping themselves to take over practically any job that men can do. Furthermore few of them are reluctant to don themselves in the same type of clothing men have worn for these jobs. Classification of these shoes, however, will prove difficult to the point of being unnecessary in



the opinion of most authorities, except in the case of safety, box toe and powder plant types which obviously must have certain qualifications and which are therefore easily classified as "special factory shoes" for women.

Frank Winter, president of Conaway-Winter, Inc., St. Louis shoe designer, says that unless trims are extremely severe and women's work becomes tremendously heavy, promotions along this line will undoubtedly prove futile since women simply will not consent to a heavy shoe.

The consensus of opinion in Los Angeles regarding a working shoe classification for women is that there are already on the market better and more sensible shoes than women will wear. The shoemen all seem to feel that women will wear high-heeled dress shoes in spite of all advice of either shoe dealers or health authorities. However, one man said that women might be made to wear sensible shoes if they were a required part of the uniforms of defense plants.



The saddle oxford with a 10/8 or 12/8 heel and a plain toe is one of the most popular shoes now chosen by women in many occupations...

Shoes Selected "According to Feet"

Personally, I think women select working shoes according to their feet, one designer said. Some prefer a high heeled pump regardless of their duties; others always wear a low heel shoe; while others prefer a shoe with a moderate heel. A great deal should depend on the arch of the buyer's feet, and how much care they take of their feet.

Harry Williams, styleman for Rice O'Neill Shoe Co., St. Louis, reports that his company has experienced a 75 per cent increase during the past year on sales of the simple calfskin ties, low heeled casuals, and that the better dressed woman is now demanding this type of shoe in all forms for work. The recent developments of a cradle heel tread, insuring a snug fitting heel through the use of an arch and heel support while also maintaining a flexible forepart, has proven to be tremendously popular for this company.

Ben Spivak, stylist for the Milius-way" line, which features shoes especially designed for the working woman, says that the Milius Shoe Co., St. Louis, meets all demands for this type of shoe in its "Life Stride" unit. There has been a constant increase in demand for the low heeled, heavy leather walking or street shoe. Mr. Spivak is inclined towards the idea that today's variable market of work shoes includes everything the working girl could desire in the way of suitable shoes.

Wooden Soles

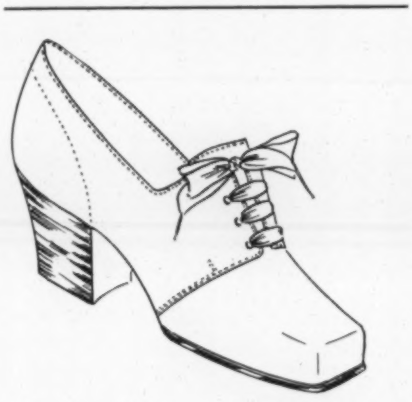
John Laycock, sales manager of the Sterling Last Co., New York, and for many years one of the foremost exponents of sound basic designing of footwear, said, after reading the tentative specifications for basic women's work shoes:

"We consider them excellent. My suggestion is that the wooden sole should be mentioned, inasmuch as it has proven so satisfactory for women's work shoes in England."*

Types Being Sold To Women Workers

Robert S. Cook, sales manager of the A. E. Nettleton Co., Syracuse, N. Y., reports that the Loafer shoe shown in the illustration on page 15, "while not strictly a work shoe, has been selling actively to women in Pacific Coast airplane factories" and that "we believe this style is also selling to women in defense work in other parts of the country."

The Coward Shoe Co., New York, some time ago displayed a collection of shoes featuring footwear designed for women active in war work, the highlight of which was a shoe designed by Miss Alice Marble, then women's director of the physical health program of the Office of Civilian Defense. The shoe was designed for daily wear by women doing active war work. Simply styled, with no trimming, it is a seamless oxford type of calf leather with a thick flexible sole and medium height heel.



Smart styling can be achieved in women's work shoes such as this four eyelet military oxford with a 14/8 heel...

The Textile and Clothing division of the U. S. Department of Agriculture advocates the closed toe shoes for women working on machines and stresses foot comfort as essential. It adds that heels should be low but not flat for feet used to high heels."

"Women stick to jobs better than

---

*Editor's Note—The development of wooden soles of various types for women's work shoes, both in England and the United States, has become increasingly important because of the sole leather situation and the need of working women for shoes with substantial soles. Because of this, wooden soles for work shoes will be discussed in some detail in a later article in this series.

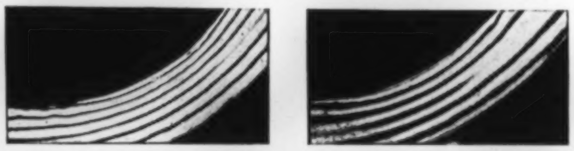
FIT FOR THE FIGHT

Millions of U. S. Fighting Men — From Submarine Sailors to Parachute Jumpers — Get All of the Country's Best Quality Leather They Need

With most of our production going into shoes for marching and fighting feet, we cannot, of course, supply our customers with the same *best* selections of England-Walton FIBRE-SORTED Soles.

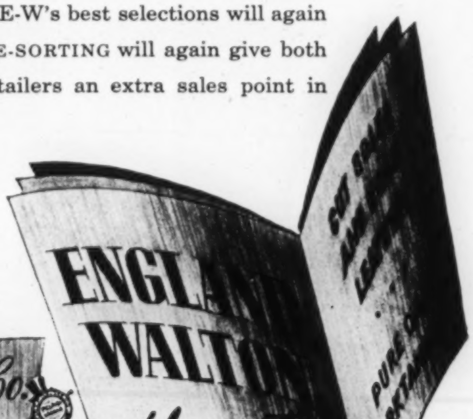
Yet, in those grades of England-Walton soles that are still available for civilian use, you can still get the same advantages of E-W FIBRE-SORTING — E-W's expert matching of soles by fibre-structure for more even flexibility and wear.

MICROPHOTOGRAPHS SHOW THE DIFFERING STRAIN LINES THAT CAUSE UNEVEN WEAR



These two pictures indicate the difference in leather's fibre structure which, if undetected, will produce uneven wearing qualities. England-Walton sorters are trained by years of exacting experience to tell at a glance from what part of the hide two soles are cut. This enables them to match soles more perfectly, and matched soles mean better arch support, more equal resistance to the stresses and strains of wear.

When the war is won, E-W's best selections will again be available and FIBRE-SORTING will again give both manufacturers and retailers an extra sales point in peace-time markets.



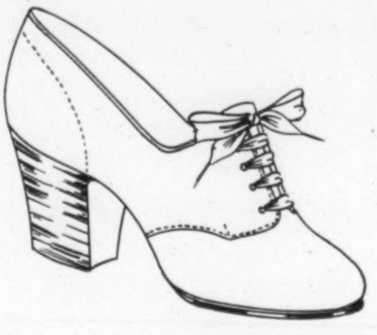
England Walton Division

A. C. Lawrence Leather Co.

Boston, Camden, Peabody, New York, St. Louis, Columbus, Milwaukee, Los Angeles, San Francisco
Ashland, Ky., Newport, Tenn., Hazelwood, N. C.

men, but their atrocious high heels are an accident hazard," observed Mrs. Clara M. Beyer, of the U. S. Department of Labor recently.

The Women's Bureau of the U. S. Department of Labor, urging more safe clothes for war workers, states that shoes for all workers in any job should be comfortable and sturdy, adding that "the thin play sandals favored by many workers are taboo—the worker's feet should be completely covered, and if she is working at a machine where objects might fall to the floor, she should be wearing safety shoes with a reinforced plastic toe."



This five eyelet oxford with 14/8 heel and plain toe provides the wearer with foot support, a heel that is convenient for operating many types of machinery, and a toe that insures comfort...

In addition to leather and wooden soles for women's work shoes, rope soles have already found considerable favor on shoes made for workers in powder factories and similar places where a non-conductive shoe is essential to safety.

The Division of Labor Standards of the U. S. Department of Labor urges women workers to "wear shoes with soles sufficiently heavy to give adequate foot protection and to use safety shoes when handling heavy objects."

"The Correct Shoe"

On the subject of safety clothing for women in industry, the Women's Bureau of the U. S. Department of Labor advises: "The correct shoe is long enough to place the ball of the foot in the tread of the shoe. The shoe allows for the natural spread of the toes, and fits snugly around the heel and instep. The heel is medium or low. The foot should always be measured with the standing weight placed on the measuring rule. The width should be fitted as carefully as the length."

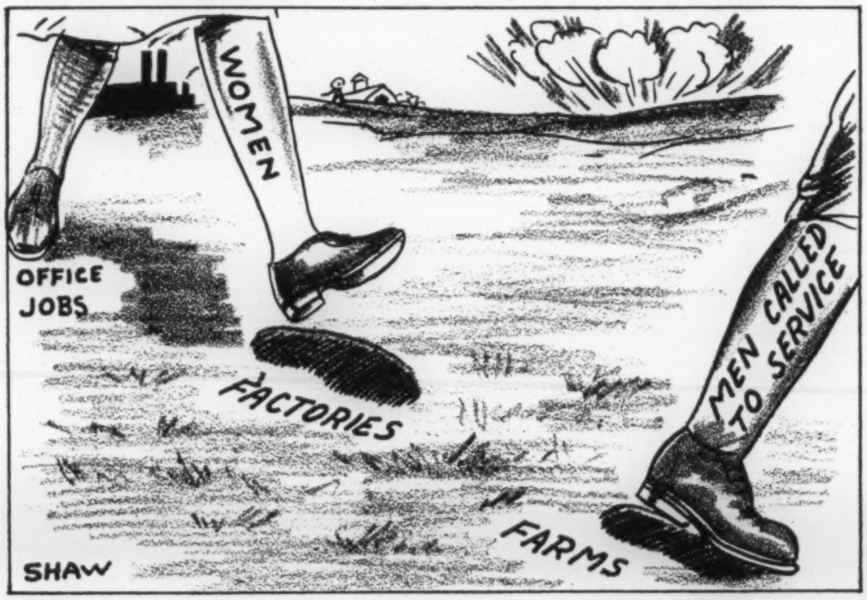
One stylist observes that there is a new need for special types of *soft* work shoes, made along casual shoe lines, for those workers who sit at machines for long periods. Circulatory troubles often arise even with young women, she stated, adding that these workers frequently wear old beach shoes or sandals, often slashed or cut for ventilation. Continuing, she asked:

"Why not use up all those splits we have for women's work shoes? This is a leather plenty good enough for such shoes, and it is not needed for military footwear."

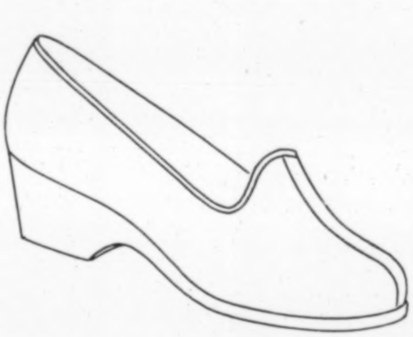
Reviewing the "ideal" for women's work shoes, a leading shoe stylist said:

Work Shoe Construction

"All those constructions we have seen grow up in recent years with half wedges or full wedges or platforms, are good for work shoes. As you know the various California factories that have made special shoes for airplane workers have actually made casual shoes, as we know them, in many cases they can use lighter weight sole leather to advantage, as a bottom, in conjunction with some other sole material, such as felt.



"The type of 'arch' shoe made as a comfort type for so many years is of doubtful value for work shoe construction. The narrow fitting tendency in these shoes has been gradually changing in recent years. Now it is taken for granted that women can be fitted in broader measurement lasts, and fitters do not follow the old rule of "fitting longer and narrower" when in doubt as to the correct size. Broad forepart, high fronted lasts (not walled but raised in depth over toes) are accepted as style and also for comfort shoes today. Heavy steel arches, and all those various talking points in arches and shanks are not half so important for work shoes as are broad measurements and easy fitting shoes that give adequate support.



"Loafer" type shoes provide comfort and protection for women workers...

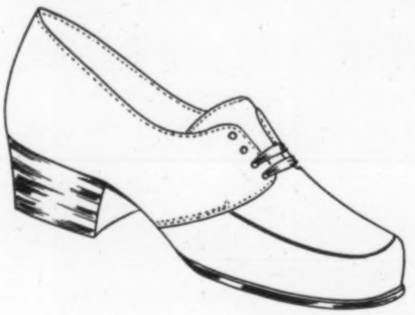
"Actual safety shoes are something else again. Non-skid soles are just as important a factor in safety for some special uses as are special safety toes and boxings, etc.

"Work shoes for women are wanted in black, tan, white, and navy blue. The tan they like is similar to the Sam Browne belt color or the Golden Tobacco color chosen for WAAC calfskin shoes. This is also the identical color called Army Russet. In a factory in Baltimore they wear a specified shoe in black; in a California plant they wear any color they want with the mandatory coverall trouser. By work shoes, in this case, I also mean certain 'issue' type shoes to be worn with white aprons or coverall dresses, etc., as work outfits. That is why I include white and blue.

"Ventilation is of great importance in work shoes, just as in nurses' shoes. Best nurses' shoe acceptance today is for those that have instep ventilators, in a closed up shoe, or perforations for greater coolness; especially important today in cemented construction shoes. Workers who sit for long hours at machines are especially interested in ventilated shoes.

"One single comfort feature workers seem to like is a cushiony feel in forepart."

Numerous other trade opinions on the development of suitable work shoe types were included among the views of women's shoe manufacturers and distributors reported in earlier articles in this series.



The moccasin type shoe with a 10/8 *or* 12/8 *heel is a popular model for women workers and is now made by many manufacturers, but not identified as a work shoe...*

From every part of the country where women are working in industrial, commercial, clerical, agricultural, and hundreds of other fields the call for better work shoes for women—and for proper classification and identification of suitable work footwear—is increasing.

Among the women engaged in factory work as a part of the American war effort, investigators have found conditions relating to feet and footwear which only shoemen themselves can remedy. Medical authorities state unequivocally that education about proper footwear is sadly needed among a large majority of younger women in factories, plants and offices.

"Up to Shoe Manufacturers"

Dr. Charles Girvan, podiatrist, bluntly says: "There's not enough time today for health departments, factory medical units, or others to explain to a million or more women what they're doing to their own feet through ignorance. It's flatly up to the shoe manufacturers and the shoe retailers of this country to present to these women workers the type of shoes they should wear while at work. Only combined action and the force of advertising can do this. And first of all, appeal to the woman's style sense; make her want the right shoes for the job by making the shoe attractive and suitable. Women have a right to vanity; it's a saving grace; otherwise they would be far less attractive. Combine the proper shoe with the style idea, and then put the story over, and the American shoe industry will have created more goodwill than in any other instance of honest promotion."

Aside from the purely orthopedic advantages of properly designed shoes for working women is the usually overlooked safety factor. Safety engineers have done yeoman service among men, educating them to wear safety shoes on hazardous jobs. Women have been somewhat neglected in this field. In factories everywhere one sees women standing at work for hours at a stretch, on all types of floors, and going up and down stairways, in shoes carrying high heels, with straps that sooner or later become uncomfortable, or with cutouts and other pattern features not suited for feet of working women. In plants where acids are used, perforated or cutout shoes are a constant danger to the wearer. High heels are a menace, standing or sitting. Tight footwear is injurious, in more ways than one. All these are known facts to shoemen; but either ignored or unknown by the majority of women.

The saddle oxford and the loafer types of shoes have been worn—are still worn—by thousands of women working in offices and plants. But not all women can comfortably wear such very low heeled footwear for long at a time. The need for serviceable shoes on heel heights varying from 8/8 to 14/8—the latter for higher arches and insteps—becomes increasingly apparent.

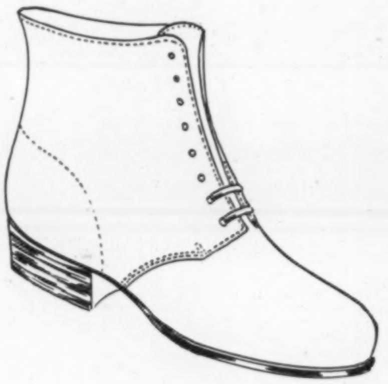
"Mannish but not Pluggy"

"They should be mannish, but not 'pluggy,'" says one chain buyer. "A shoe for war work must have just the right touch of femininity, without any emphasis on the dressy side. Women are already back to the more sensible heel heights; they'll accept low heels. They want semi-masculine lasts. You can't take an old lady's running shoe, make it out of tan calf or side leather, put a strap and buckle on it and call it a woman's work shoe. Neither can you add frills to any sort of old fashioned shoe, because the basic wood won't allow that sort of decorative treatment. You have to start with a trim, neat last and work from there. Save your perforations for after the war sports shoes and present dress styles. Confine your stitching to mannish type saddle and cable stitching, and not too much of it. Watch the toe caps if you use them—keep them slightly feminine, also. And above all, keep the pattern streamlined for speed in cutting and making up."

Retailers are ready for long term promotion of cleverly conceived, logically designed, smart appearing war work shoes for women.

"Such footwear will prove the backbone of all promotion 'for the duration,'" states a Boston department store merchandise manager. "From that central framework, retailers can all the more emphasize correlative lines and types of shoes."

Margaret E. Wambsganss of the Department of Commerce asserted recently that "shoes with closed toes, or reinforced toes, are recommended for factories where metal filings collect on floors, or where heavy parts are handled. Protection against hot materials, acids, or excessive moisture requires a particularly heavy shoe. Chrome leather shoes with side openings are sometimes needed. Where spark explosions occur, sewed or wood pegged soles and heels must be used. Employes in powder factories must wear shoes of smooth material, with no thick seams or rough edges in which explosive dust may be carried from the plant."



The ankle high boot with plain toe and low heel is needed by agricultural workers...

Editor's Note—The seventh article in this series will be published in the Dec. 5 issue and will continue the report on designs, materials, and specifications for women's work shoes. Special attention will be given later in this series to some of the major feminine occupations in which definite foot hazards are prevalent.

A NAME WHICH STANDS FOR PROGRESS AND IMPROVEMENT IN THE ART OF SHOEMAKING

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Simplicity of design calls for the trim neatness and refinement which are Compo characteristics. It is, therefore, natural that the advantages of this improved technique are more appreciated now than ever before. Equipment and adhesive as developed by Compo provide the most highly approved and efficient method of making shoes according to the requirements of today.

COMPO SHOE MACHINERY CORPORATION
BOSTON, MASSACHUSETTS

COMPO MAKES THE MACHINERY THAT MAKES THE BETTER SHOES

shoes. Best nurses' shoe acceptance today is for those that have instep ventilators, in a closed up shoe, or perforations for greater coolness; especially important today in cemented construction shoes. Workers who sit for long hours at machines are especially interested in ventilated shoes.

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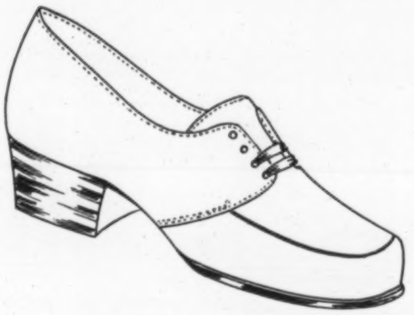

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Among the women engaged in factory work as a part of the American war effort, investigators have found conditions relating to feet and footwear which only shoemen themselves can remedy. Medical authorities state unequivocally that education about proper footwear is sadly needed among a large majority of younger women in factories, plants and offices.

"Up to Shoe Manufacturers"

Dr. Charles Girvan, podiatrist, bluntly says: "There's not enough time today for health departments, factory medical units, or others to explain to a million or more women what they're doing to their own feet through ignorance. It's flatly up to the shoe manufacturers and the shoe retailers of this country to present to these women workers the type of shoes they should wear while at work. Only combined action and the force of advertising can do this. And first of all, appeal to the woman's style sense; make her want the right shoes for the job by making the shoe attractive and suitable. Women have a right to vanity; it's a saving grace; otherwise they would be far less attractive. Combine the proper shoe with the style idea, and then put the story over, and the American shoe industry will have created more goodwill than in any other instance of honest promotion."

Aside from the purely orthopedic advantages of properly designed shoes for working women is the usually overlooked safety factor. Safety engineers have done yeoman service among men, educating them to wear safety shoes on hazardous jobs. Women have been somewhat neglected in this field. In factories everywhere one sees women standing at work for hours at a stretch, on all types of floors, and going up and down stairways, in shoes carrying high heels, with straps that sooner or later become uncomfortable, or with cutouts and other pattern features not suited for feet of working women. In plants where acids are used, perforated or cutout shoes are a constant danger to the wearer. High heels are a menace, standing or sitting. Tight footwear is injurious, in more ways than one. All these are known facts to shoemen; but either ignored or unknown by the majority of women.

The saddle oxford and the loafer types of shoes have been worn—are still worn—by thousands of women working in offices and plants. But not all women can comfortably wear such very low heeled footwear for long at a time. The need for serviceable shoes on heel heights varying from 8/8 to 14/8—the latter for higher arches and insteps—becomes increasingly apparent.

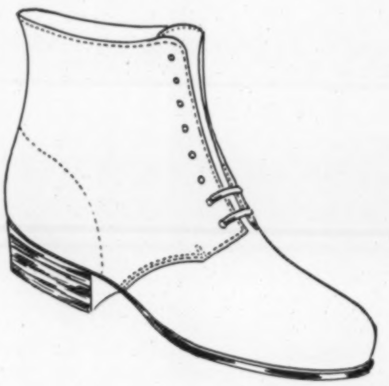
"Mannish but not Pluggy"

"They should be mannish, but not 'pluggy,'" says one chain buyer. "A shoe for war work must have just the right touch of femininity, without any emphasis on the dressy side. Women are already back to the more sensible heel heights; they'll accept low heels. They want semi-masculine lasts. You can't take an old lady's running shoe, make it out of tan calf or side leather, put a strap and buckle on it and call it a woman's work shoe. Neither can you add frills to any sort of old fashioned shoe, because the basic wood won't allow that sort of decorative treatment. You have to start with a trim, neat last and work from there. Save your perforations for after the war sports shoes and present dress styles. Confine your stitching to mannish type saddle and cable stitching, and not too much of it. Watch the toe caps if you use them—keep them slightly feminine, also. And above all, keep the pattern streamlined for speed in cutting and making up."

Retailers are ready for long term promotion of cleverly conceived, logically designed, smart appearing war work shoes for women.

"Such footwear will prove the backbone of all promotion 'for the duration,'" states a Boston department store merchandise manager. "From that central framework, retailers can all the more emphasize correlative lines and types of shoes."

Margaret E. Wambsganss of the Department of Commerce asserted recently that "shoes with closed toes, or reinforced toes, are recommended for factories where metal filings collect on floors, or where heavy parts are handled. Protection against hot materials, acids, or excessive moisture requires a particularly heavy shoe. Chrome leather shoes with side openings are sometimes needed. Where spark explosions occur, sewed or wood pegged soles and heels must be used. Employes in powder factories must wear shoes of smooth material, with no thick seams or rough edges in which explosive dust may be carried from the plant."



The ankle high boot with plain toe and low heel is needed by agricultural workers...

Editor's Note—The seventh article in this series will be published in the Dec. 5 issue and will continue the report on designs, materials, and specifications for women's work shoes. Special attention will be given later in this series to some of the major feminine occupations in which definite foot hazards are prevalent.

HIDE and LEATHER and SHOES'

Tentative Specifications for Basic Women's Work Shoes

Suitable for wear under ordinary occupational conditions in factories, and stores where no special condition or hazard of employment exists. Including basic requirements of footwear for agricultural workers.

> **"I consider these specifications ideal and I sincerely hope that some of the country's progressive manufacturers will go into production on women's work shoes immediately. Such footwear will be extremely helpful to those women employed in war industries to maintain their foot health, to prevent accidents caused by inadequate and worn out dress shoes, and to improve their efficiency and morale by keeping their feet and footwear out of mind.**
>
> **"I would recommend a special bulletin describing and illustrating women's work shoes to be sent to the personnel department of every plant where any sizable amount of women are employed on war work."**
>
> **Dr. Joseph Lelyveld,**
> **Chairman,**
> **National Foot Health Council**

General—No leathers or other materials required for military use should be used in the production of women's work shoes.

Construction — Chief requirements are that the shoe be comfortable and durable throughout its life in work wear. Goodyear welt construction generally preferred but other constructions may be satisfactory if they meet the basic requirements and provide proper support for the foot.

Lasts—Must provide sufficient room for comfortable fit at all parts of the foot. The type of lasts now commonly used for growing girls' and sports oxfords and similar types of footwear is the most satisfactory if the shoe is fitted properly. Nurses' shoe lasts do not meet all the requirements of general work wear. Orthopedic and health shoe lasts not generally satisfactory for women's work shoes as they are made for special foot conditions and should not be commonly used for normal foot conditions. Round toe lasts, providing ample foot room across the ball and ample height at toe and instep are preferable. Square toe and wall lasts considered acceptable by shoemen but not particularly liked by workers. Lasts with pointed toes, low toe and/or instep, excessive swing, etc., not acceptable.

Patterns—Saddle oxford, moccasin, and four or five eyelet oxford patterns most desirable. There should be no inside seams in moccasin type shoes. Five eyelets are preferable to four in oxford types because of the added support they give to the foot. Variations of these are acceptable. Elimination of seams, overlays, trims, etc., that may cause pressure or chafing should be carried out as far as possible. Simplicity and comfort most desirable factors. Open toes, heels, shanks, etc., not acceptable. Cutouts generally undesirable. Perforations satisfactory for most working conditions and very desirable for summer wear or under work conditions where excess heat is present.

Upper materials—Soft, durable, medium weight leather preferred. Desirable leathers include side upper, kips, calf, kid, horse, and splits if of satsfactory weight, etc. Fabrics, plastics materials, etc., undesirable.

Sole — Flexible, medium weight leather soles preferable for most work conditions. Heavier or lighter weights sometimes more desirable. Rubber acceptable for some conditions but not generally desirable. Platform soles inclined to be clumsy for most work wear, although acceptable for some. Most important requirements are good support, flexibility, and foot protection. Wood soles desirable for many types of occupational wear and acceptable for many others. Flexibility should always exist at the ball area, the natural hinge of the foot.

Heels—Built up heel with rubber toplift acceptable. Wedge heels generally undesirable for many types of factory work as they do not permit easy operation of machinery requiring pedal control. Medium and low heel heights are preferred. Either is satisfactory to foot health authorities, shoe manufacturers, and desgners. Many workers prefer medium heels because they are easier for pedal control of machinery and are a less pronounced change from high heels worn for dress. High heels of any kind are not acceptable; heel heights should not exceed 14/8.

Shanks — Broad shanks furnishing strong support to the foot are necessary. Steel or combination shanks are preferable. Wood shanks acceptable if conforming to basic requirements.

Arches—Special attention to proper fit and support of arch is necessary. Unusual types of arch supports such as are often used in "comfort," "health," and orthopedic footwear are not generally desirable for ordinary work wear as they are not specially suitable for normal feet under general conditions.

Special features—The special appliances, pads, supports, and other features which are frequently used as sales incentives in the promotion of orthopedic, comfort, and health shoes are not generally desirable for work shoes. A well constructed and properly fitted shoe is more desirable than one which includes needless "gadgets."

Counters—Medium height long counters are most satisfactory for ordinary wear. Should be flexible and designed to prevent chafing while furnishing good support to the back part of the foot.

Box toes—Should permit ample toe room and be made of materials that will not crush or collapse under normal wearing conditions. Chafing of toes or foot by box toes should be guarded against.

Linings—Some foot health authorities believe leather linings are undesirable because two pieces of leather with flesh side together limits the porosity of both pieces and prevents the normal stretch and elasticity of the leather. They hold that unlined shoes also may be undesirable because the flesh side causes stocking drag when the feet become warm or moist; this was evidenced by a test made among 450 women working in 16 laundry plants. Other authorities prefer for general work wear a shoe with a soft porous leather lining, with plain or coated fabrics deemed acceptable. It is important that the inside of the shoe be as smooth as possible, with few seams and no wrinkles.

Insoles—Flexible leather insoles preferable. Some fibre insoles acceptable.

Workmanship — Careful workmanship is important. All operations must be performed so that accurate fitting is accomplished. Wrinkled linings, heavy seams, rough insole surfaces, crooked seams improperly placed counters and box toes, insecure heel attachments, etc., must be guarded against.

Modifications for special conditions—The basic work shoe can be readily modified for special work conditions. Boots are wanted for a few occupations. Wood or rope soles may be used. Safety steel box toes are essential where special foot hazards are prevalent. Spark-proof construction is required where danger of explosion is present. Such occupational conditions require special study and attention.

Farm shoes—The creation of at least several basic types of farm work shoes is important. In the **dairying** sections of the country, the basic type should be one that is especially suitable for barn and barnyard work; moisture and acid resistant, slip proof, and ankle or boot high. In the dry **grain and cotton** sections and in dry areas where fruits and berries are leading crops a field

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Awarded September 28, 1942 to

VICTORY PLASTICS CO., HUDSON, MASS.

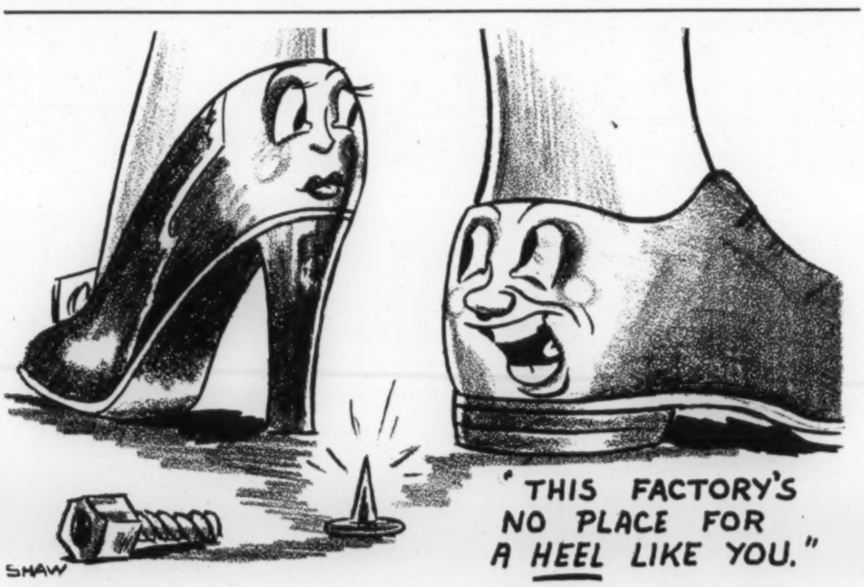
SUBSIDIARY OF

Beckwith Manufacturing Co.

DOVER, NEW HAMPSHIRE

type shoe is most satisfactory; a medium weight, oxford or ankle high shoe with a broad substantial sole. In the **range areas** the cowboy boot is and will continue to be, the most popular for both men and women. For **truck gardens** under dry working conditions an ankle high shoe similar to the field shoe is required; if soil conditions are excessively damp or wet an ankle or boot high shoe which is at least partially moisture resistant is needed. Workers engaged in such occupations as cranberry picking where the work is done in bogs or swampy areas require waterproof or moisture resistant substantially constructed shoes of ankle or boot height. One of the most frequent complaints is that very little footwear is available that falls between oxford and boot heights and that ankle high shoes are badly needed by women on farms. Oxfords are too low in many cases to properly support the ankle and to protect the feet from dirt and pebbles working into the shoe, while in many other cases boots are too heavy and uncomfortable.

General Recommendations — Types of female employment in sections where manufacturers' shoes are most commonly distributed should be ascertained and the occupational conditions prevalent in those types of employment should be studied and analyzed. Several shoes should be specially designed to meet the requirements of the workers in the market to be developed, so that variety of fit and design may be offered. Complete size ranges are highly important, and provision should be made to fill special sizes from in-stock if necessary at only a slight extra cost to the consumer. Care should be taken to embody in all work shoes the essential details of design and construction and to coordinate these details with those prevailing in dress shoe types, so that the change from work to dress shoe wear and vice versa will not tire the feet or induce an awkward gait. It is also recommended that women's work shoes should be fitted larger than the usual dress shoe size, as the foot expands under pressure of standing or operating machine pedals when working in warm rooms.


"THIS FACTORY'S NO PLACE FOR A HEEL LIKE YOU."
SHAW

Two Groups of Work Shoes Needed Says McCall's Editor

Mr. Ralph B. Bryan, Editor,
Hide and Leather and Shoes,
300 West Adams St., Chicago, Ill.

Dear Mr. Bryan:

I am sending you herewith a clipping of an article called "On the Midnight Shift." This article is enclosed for your attention. It concerns an airplane parts worker who makes awfully good copy.

Here is what we learned from this girl and her associates about shoes for factory work. In her particular factory, most certainly, the biggest problem is the problem of oil. So far as we could find out the personnel department has no special recommendations to give the girls. The girls themselves figured out that they must have shoes with thick soles and unperforated uppers. Our girl was smart enough to pay a good price for the toughest moccasin type sport shoes she could find. She is very intelligent and bought two pairs so that she could alternate them!

Another problem is the lye solution used to remove the oil in this factory. This lye solution eats the leather, which makes it crack. Only the best quality shoes can stand up under these conditions.

Actually, I believe, shoes for women workers should be divided into two groups:

(A) Real work shoes, and that includes factory workers, farm workers, women in branches of the armed services who may be asked to do "dirty" work, etc.

(B) Service shoes, which would include all the sturdy working shoes suitable for every kind of woman worker, from an office worker to a WAAC.

We believe that the two kinds of shoes are quite different and should be manufactured and merchandised differently. If the facts which the Man Power Commission gave us are indicative, the shoe industry should be taking very seriously the problem of providing "dirty work" shoes for women in industries. A tailored-looking shoe isn't the same thing. I have not studied the field carefully, but it is my impression that the shoe industry has not yet seen all around the problem.

A Letter From

Hildegarde Fillmore

Style and Beauty Editor, McCall's Magazine

There is a big educational job to be done on both the factory-type work shoe and the lighter service shoe. Newspapers and magazine writers could and should be given more information to pass on to women on this subject. Women are interested in the lightning-like changes occurring in their everyday habits.

The work you are doing will, I hope, serve to get into production the shoes really needed by women in this emergency. Every personnel manager dealing with women in every large industrial plant, and a representative group of personnel managers dealing with women in small subcontracting plants, should be contacted immediately to find out what cooperation they can give in this important shoe problem. Thousands of hours of work are lost because of foot fatigue. If sample specifications could be made for (a) work shoes, and (b) service shoes, it would certainly be a step in the right direction.

Sincerely,
Hildegarde Fillmore,
Style and Beauty Editor,
McCall's Magazine.

ON THE JOB

A Celastic *composite* box toe gives this attractive shoe for war workers a strong, durable box while maintaining trim lines.

AFTER HOURS

Wartime limitations may affect external styling but the character forming lines of the last will always find their truest expression through the conformability of Celastic.

SHOE FACTORY

A MONTHLY DEPARTMENT OF HIDE and LEATHER and SHOES

Women's Work Shoes In the Agricultural Field

NO study of the potential markets for women's work shoes would be complete without a survey of the occupational conditions and footwear needs of women engaged in agricultural work. This group of working women performs so many different forms of labor under such widely diversified conditions that it could not be considered in conjunction with the groups engaged in factory, clerical, and commercial occupations.

It has been shown in preceding articles in this series (H&L&S. Sept. 5 *et ante*) that serious effort to provide working women in any field, except those in the nursing profession, with suitably designed and constructed footwear for work wear has been practically nil. There has been some talk and complaint in consumer groups about this long neglect of perhaps the most important footwear need of women, but none of the talk has led to concerted action on the part of either consumer or trade groups to remedy the situation. Shoemen, keeping their eyes fixed on fashion whims and fancies, have passed lightly over the functional needs of working women. There has never been a recognized classification of women's footwear under the heading "women's work shoes." This extensive study of women's work shoe needs has failed to reveal any important instance where the shoe trade has promoted suitable footwear clearly identified as women's work shoes.

Yet this study has proved that there is not only a need for proper work shoes, but that women want such footwear and would pay as much or more, generally, for such shoes as for dress types. The need has *always* existed because there are normally over 10 million women working at hundreds of diverse occupations in the United States; wartime employment levels will soar to perhaps 50 per cent above that mark; and post-war declines will probably not recede to the pre-war mark. Therefore, there is an obvious market for women's work shoes now as a contribution to the war effort and later as a profitable staple item.

For several reasons it is not easy to secure a comprehensive picture of exact occupational conditions and trends of agricultural employment.

Agricultural Employment Trends

The Bureau of the Census reports for the year 1930 that there were 10,471,998 agricultural workers, of which about one million were women. A study of employment trends in agriculture reveals that an outstanding characteristic of agriculture during the past three decades is the decline in the number of farm workers. The population of the country in 1919 was about 16 per cent larger than in 1909, and yet the average number of farm workers was about 9 per cent smaller. After the World War there was a slight increase in the number of farm workers, but in 1927 the decline was resumed and in 1938 the average number was 12 per cent smaller than in 1909, although the total population of the country was about 44 per cent larger.[*]

Steady advancements in the development and use of machinery to displace workers on farms has in large part been responsible for the declining trend of agricultural employment, while improved methods of transportation and distribution of farm products has resulted in a lessened need for farm workers.

During the past 30 years agricultural employment has varied widely in the different farming areas. The greatest declines took place in the eastern dairy, eastern cotton, corn, and middle eastern areas. In the northwestern and range areas increases in the number of farm workers were accounted for mainly by the increased acreage in those areas.

Fifth of a series by

Alfred Henderson

Reporting HIDE AND LEATHER AND SHOES' study of women's work shoes

There were also increases in both acreage and agricultural employment in California, while in the other main farming areas there were few significant employment changes.

Before anticipating the footwear needs of the women engaged in farm occupations, it is extremely important that some outstanding characteristics of agricultural employment in the United States be understood.

Occupational, Social, And Economic Distinctions

Recent studies of agricultural conditions by Government agencies generally distinguish between family

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[*] "Farm Employment, 1909-1938"; *Monthly Labor Review*, June, 1939.

On a sprawling Sierra Vista ranch in California's San Joaquin Valley these energetic harvesters include stenographers, actresses, authors, housewives, students, and salesgirls.

International News Photo.

workers and hired workers. To the shoeman, these two groups constitute a single market because they are engaged in identical labor under the same working conditions. Their footwear needs, therefore, are identical, but the groups do not constitute identical footwear markets because of social and income distinctions commonly noted between the two which affect their footwear desires and their buying power.

The large number of "hired workers" in agricultural occupations are still further sub-divided into groups of regular full time workers, seasonal workers, and migratory workers. Although these workers are all engaged in similar activities, the distinctions as to social and economic status between these three classes is even more marked than it is between those of the family workers and full time hired workers.

All of these occupational, social, and economic distinctions in agricultural employment are important because they affect the planning of any shoeman for cultivating a market for work shoes that is apparently thoroughly awakened to the need of more suitable work footwear. Farm men are well provided with work shoes of various kinds, suitable for all of their work needs. Farm women are loud in their complaints that they are unable to purchase suitable work shoes, and authoritative spokesmen for large groups of farm women flatly assert that suitable work shoes are not generally procurable and that farm women have been wholly neglected by the shoe trade.

These complaints warrant a far more complete study of the needs of farm women by the shoe industry than has yet been reported.

Most women workers in farm occupations are now wearing footwear designed for urban use: footwear that is too heavy and uncomfortable for feminine use but is worn only because no more suitable shoes are available; or rubber and rubber fabric footwear of many kinds. In only rare instances are farm women wearing work shoes which could be called suitably designed and constructed for the purpose.

Government agencies and leaders of farm women's organizations concur that none of the footwear now available to farm women is ideal for work wear; only a small part is even passably acceptable; and most of it is highly undesirable.

The reasons for this condition do not entirely lie within the shoe industry and the tendency of the complainants to make the shoe industry the sole scapegoat does not make the situation any easier to adjust.

Ever since the close of World War I the women's shoe industry has been a fashion industry and the development of new styles of feminine footwear has resulted in a swiftly moving panorama of fashion. The earnings of women's shoe manufacturers have come largely from the promotion of styles of high and low degree (which is perhaps one of the reasons that earnings of women's manufacturers have also been of "high and

ESTIMATED NUMBER OF FARM WORKERS IN PRINCIPAL FARMING AREAS OF THE UNITED STATES IN 1936

Area	Total (thousands)	Family Workers Number (thousands)	Family Workers Percentage of total	Hired Workers Number (thousands)	Hired Workers Percentage of total
Corn area	1,235	950	77	285	23
Eastern dairy area	737	502	68	235	32
Western dairy area	922	714	77	208	23
Middle eastern area	1,904	1,576	83	328	17
Eastern cotton area	1,383	1,091	79	292	21
Delta cotton area	1,342	1,099	82	242	18
Western cotton area	1,145	909	79	236	21
Small grain area	742	606	82	136	18
Range area	308	196	64	112	36
Northwestern area	292	212	73	80	27
Miscellaneous*	987	647	66	340	34
Total	10,997	8,502	77	2,494	23

*California, Missouri, Florida, Delaware, New Jersey, Rhode Island, Maine.

Data are from U. S. Works Progress Administration, National Research Project No. A-8: "Trends in Employment in Agriculture, 1909-1936."

low degree" in recent years). The dominating demand for women's fashion footwear has come from urban centers where population is concentrated in compact market areas and where consumers can most easily and most effectively make their wants known and respected. This may work out well enough for women in cities and towns, but it hasn't satisfied women in farm areas.

"Urban Styles" Are Not Satisfactory

High heels, narrow soles, open toes, open shanks, open backs, and most of the other fashion fancies of the urban women are entirely unsuitable for her rural sister, even for ordinary dress wear. Women on the nation's farms don't want "clodhoppers" but they do want shoes that are designed with some consideration for unpaved paths, stony lanes, and working hours spent in fields and gardens and barns.

This brings us back again to the farm woman herself, and to a field for women's work shoes that includes customers of widely differing social and economic levels.

In general it may be said that the basic work shoe requirements of women in agricultural occupations are comfort, durable materials, sturdy construction, and styling adapted to the conditions under which the shoes will be worn.

Such a general summary is not enough, however, if the industry is going to do anything constructive about this branch of the neglected women's work shoe market. The urban market can be fairly well classified by major types and conditions of employment and by fairly well defined economic divisions. The rural market is entirely different.

Family Workers

The farm group classified as family workers includes farm operators and members of their families who work on their farms without wages. This includes farmers and their families operating profitable farms of greatly varying sizes. These are generally well informed about clothing styles, they have a solid social standing in their communities, and their incomes are large enough to enable them to pay good prices for their purchases.

The same general group of family workers also includes owners of unprofitable farms and their families, many of whom are hard pressed to secure such necessities of life as are not self-produced. In general, they spend more time working on their land than their more prosperous fellow farmers and less time in social activities. They must "shop closer" and they are looking for considerably lower priced merchandise.

A third sub-group of family workers includes tenant farmers and sharecroppers and their families. Some of these may be classed in a relatively high social and economic strata; mostly, however, they are the poorest and hardest pressed of all farm family workers and often they are poverty stricken, undernourished and financially unable to secure bare necessities for life except at the sacrifice of other necessities. They shop for the cheapest priced merchandise and literally "wear it out" before buying replacements. This sub-group cannot be ignored as a work shoe market, but it must be considered as an entirely different market on the whole from the first two sub-groups mentioned.

Hired Workers

Hired workers represent less than 25 per cent of the total workers in agricultural occupations, according to 1936 census reports. California and Florida are the only two states employing well above the average number of hired farm workers; the proportion of hired workers to total agricultural employment in those states being, respectively, about 43 to 38 per cent. Hired workers in the middle eastern area represent only 17 per cent of total agricultural employment. The cotton areas also have a low percentage of hired workers, but comparisons of these sections must take into consideration the fact that sharecropping is widely prevalent there and that those sharecroppers frequently have a status essentially below that of hired workers in many other parts of the country.

Hired workers, like family workers, should be considered in three sub-groups: Regular workers, seasonal workers, and migratory workers.

The first group consists of hired workers who are engaged throughout the year as managers, foremen, or general farm hands. Their social and economic status compares with regularly employed industrial workers.

The second group consists of workers who are employed only through planting and harvest seasons and who are at other times of the year employed in non-agricultural occupations or who are wholly or chiefly unemployed in the off-seasons. Estimates of seasonal variation in total agricultural employment for the United States as a whole indicate that January is the month of least employment and June the month of greatest employment. The amount of employment in the high month has usually been about 43 per cent greater than the amount in the low month. Variations in some areas have been much greater. In the area of least variation—the corn area—the amount of employment in the high month has been only about 24 per cent greater than in the low month; in the area of greatest variation—the eastern cotton area—there has been about 86 per cent more employment in the high month than in the low. This seasonal variation of employment is greater among hired workers than among all agricultural workers. Furthermore, hired workers receive wages only while actually at work, while the income of family workers is based on annual farm income and not on seasonal employment.

The third sub-group of hired workers includes the nomadic armies of migratory workers and their families who regularly follow the crops and the seasons through the farm belts; whose income is uncertain and whose standards of living are always insecure and often pitiful. They lack opportunity to identify themselves with normal community life and their family "shopping tours" depend entirely upon the possession of ready cash and purchases are frequently ill chosen. This army of migratory farm workers, even today, constitutes a social problem. The social problem is also an economic

America's vast orchards are an important "battleground" in agriculture's crusade for more "food for freedom." Orchardists, like other farmers, are depending on women workers to a greater extent than ever before.

Lambert Photo

one for the nation as a whole, for if it could be solved in any reasonable degree a brand new market would be instantly opened up for many consumer goods, and especially for such personal necessities as shoes and clothing. Migratory farm workers can today be considered only as a marginal market for footwear designed for agricultural workers. If their economic status was improved they would be an influential part of the rural market.

Of course all migratory workers cannot be classed with those whose hardships have been portrayed by John Steinbeck and other writers of recent years. There are many whose status is higher than that of many industrial workers who are frequent victims of seasonal employment conditions and who at the same time lack some of the broadening influences which are felt by workers whose lives are not rooted in one spot.

Several Types of Farm Footwear Needed

It is obvious that all of these factors must be taken into consideration when planning to make shoes for agricultural workers and to promote their sale effectively. The shoes must be made in grades and price groups that will be acceptable to the various groups of agricultural workers, and they must be marketed in well defined seasons when demand and buying power are at their peak. Shoe buying in urban areas is on a day-to-day basis; in many rural areas it is restricted by seasonal trends. A California ranch, for example, may need 300 workers at harvest time but only require 10 regularly through the year. This means that in the season of high employment, 300 workers will need shoes and be able to buy them, while in the off-seasons there will be much less demand and ability to buy on the part of the 270 extra workers.

The work shoe requirements of agricultural workers are as diversified as the agricultural occupations themselves. There is a vast difference between field work and garden work and barnyard work, and the footwear requirements of these jobs are also quite different. However, it is both practical and reasonable to design shoes that will meet the specific requirements of these various forms of agricultural work, because the farm worker will naturally select the type of shoe which best meets the conditions under which she works most of the time, and which will be reasonably satisfactory for the lesser periods of time spent in another occupation.

The creation of at least several basic types of farm work shoes is important if the field is to be properly served. It is also important that the recognizable demand in various farm sections be classified according to basic types most suitable in each section. In the dairying sections, the logical basic type to be offered would be one that was especially suitable for barn and barnyard work; moisture and acid resistant, slip proof, and ankle or boot high. In the dry grain and cotton sections and in dry areas where fruits and berries are leading crops a field type shoe would presumably be most satisfactory: a medium weight, oxford or ankle high shoe with a broad substantial sole. In the range areas the cowboy boot is and will continue to be, the most popular for both men and women. For truck gardens under dry working conditions an ankle high shoe similar to the field shoe seems most likely to be favored: if soil conditions are excessively damp or wet an ankle or boot height shoe which is at least partially moisture resistant will be needed. Workers engaged in such occupations as cranberry picking where the work is done in bogs or swampy areas will require waterproof or moisture resistant substantially constructed shoes of ankle or boot height.

Two Common Complaints

One of the most frequent complaints is that very little footwear is available that falls between oxford and boot heights and that ankle high shoes are badly needed by women on farms. Oxfords are too low in many cases to properly support the ankle and to protect the feet from dirt and pebbles working into the shoe, while in many other cases boots are too heavy and uncomfortable. Gaiters and leggings are widely used by farm women, but their use does not obviate the need for more ankle high shoes, which would frequently eliminate the need for gaiters and leggings which are often only an uncomfortable makeshift for suitable footwear.

Another common complaint is that it is difficult for women farm workers to buy suitable work shoes in medium price grades. Many representative women said that they can secure more suitably designed shoes in very cheap grades or in very high grades than they can at medium levels. They add that the cheap shoes do not give satisfactory wear and that the high priced shoes are beyond the means of most of the farm workers. Here, it seems, is an op-

YOU CAN'T BUILD A BOMBER WITH A LASTING-HAMMER

but — you can cut down unnecessary lasting-room waste by following these four simple rules:

Check up on your box toe sizes. Be sure that you are not buying and *wasting* valuable box toe material in sizes that are needlessly large. Properly sized box toes cost you *less* and actually improve your shoemaking.

Order as needed. Do not overstock. Waste occurs when large surplus stocks develop on novelty sizes that have *no* resale market.

Use *white* soft toes in *white perforated* shoes. Otherwise use a Beckwith grey material (stainless) for all softies.

—and most important—Use a Beckwith box toe for maximum performance. Beckwith toes eliminate lost time and wasteful replacements and in the long run they cost *less.*

All Beckwith salesmen and agents will be pleased to co-operate in studying your conditions and recommending, wherever possible, economies that will save you money and preserve valuable resources essential to the shoe industry.

BECKWITH BOX TOES

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VAPOR CONDITIONED

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AGENTS: GEO. A. SPRINGMEIER CO., CINCINNATI, OHIO

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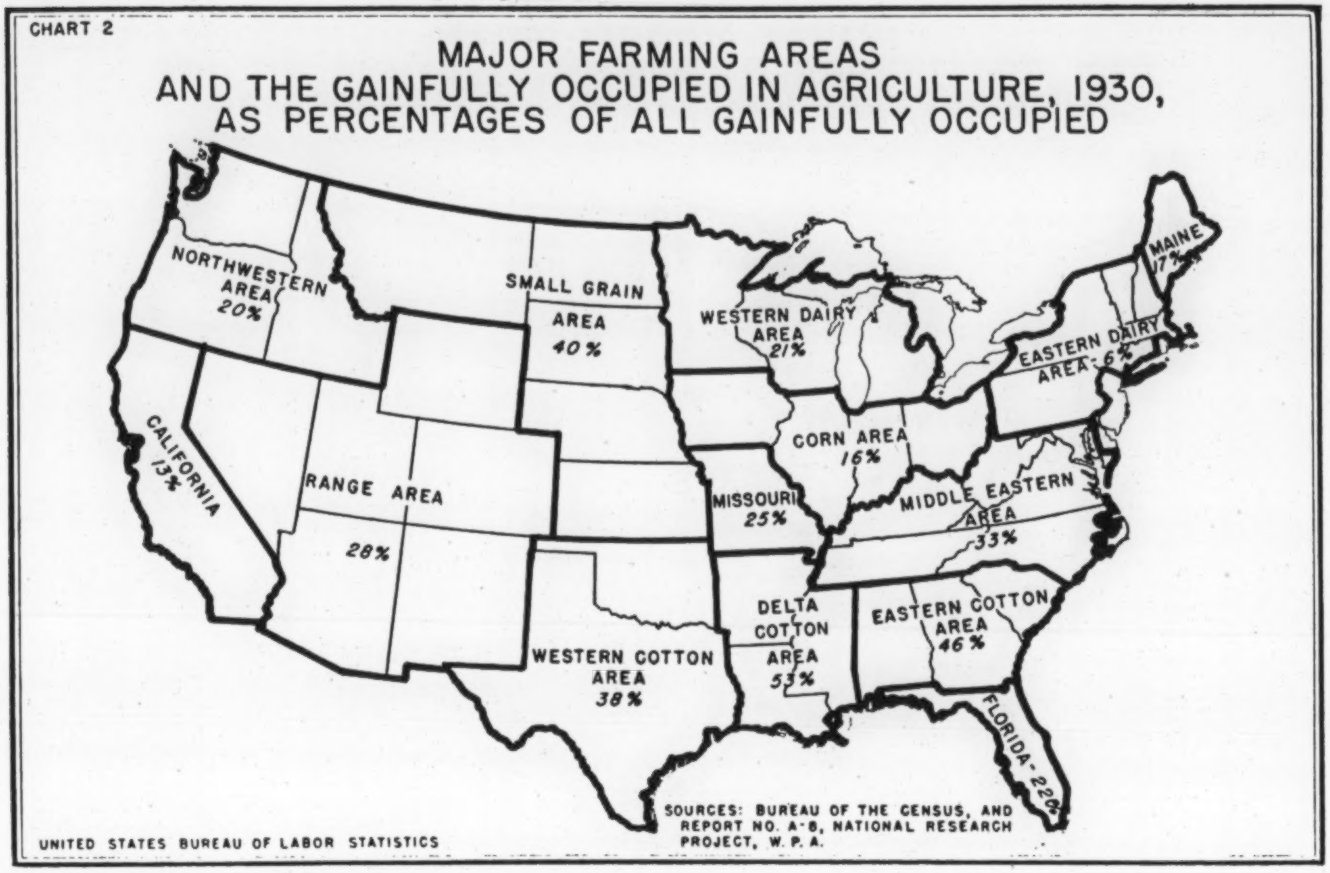

CHART 2

MAJOR FARMING AREAS AND THE GAINFULLY OCCUPIED IN AGRICULTURE, 1930, AS PERCENTAGES OF ALL GAINFULLY OCCUPIED

SOURCES: BUREAU OF THE CENSUS, AND REPORT NO. A-8, NATIONAL RESEARCH PROJECT, W. P. A.

UNITED STATES BUREAU OF LABOR STATISTICS

portunity for considerable study by manufacturers who can make good work shoes for women in agriculture to be retailed at $4.00 to $6.00 a pair, the range most frequently mentioned as not now being covered.

The foregoing presents a picture of normal levels and distribution of agricultural employment. It represents the basic conditions which must be considered in planning work shoes for women in agriculture. It outlines a footwear need that has long existed. But the need is sharpened by war conditions and meeting the need is fast becoming not only an opportunity for the shoe industry to develop a new footwear market, but a challenge to develop *now* suitable footwear for women agricultural workers as a patriotic effort to aid the war effort as well as a logical business effort to cultivate new markets for the industry's output.

America's Great Need for More Food

No truer slogan has ever been worded than "Food will win the war." In England, Germany, Russia and other warring nations women have taken over a large part of men's work on the farms in order that their countries will not suffer from a lack of farm production.

The *United States News* reports (Oct. 2) that "the man power shortage is striking at the heart of America's food supply. Another year of war will see more than a million men leaving the farms for the Army and for industry. This may have a serious effect upon the 1943 harvest.

"In one short year the United States conceivably could change from a land of abundance to a land of scarcity . . . The pinch has not been so serious up to this time. By working harder themselves, and with the help of older men, women, and children, farmers have produced the biggest crop in history.

"Cold figures show that there were 11,390,000 workers on farms on Sept. 1, 1942, a total slightly higher than a year ago. But these figures do not tell the whole story. They do not reflect the number of inexperienced and less efficient helpers—girls and boys, women and older men—the farmer has had to recruit for harvest.

"Food rquirements of the United States and her allies will be as large in 1943 as in 1942, perhaps larger. But the prospect of producing such a yield is dark. Farmers cannot compete in the labor market with high wages paid in war plants. They are turning to the Government for help, are relying on such expedients as those suggested by Secretary of Agriculture Wickard:

"Transporting the workers from surplus areas to critical areas; Government sponsored programs to train farm workers; draft deferment for experienced farm managers; heavy reliance upon women and younger workers; asking industry to recruit workers from cities instead of farms; aiding farmers through federal loans to increase output by using underemployed labor full time."

This is a concise summary of a situation and a threat which is familiar to every newspaper reader. Women workers are the key to the situation, as they are to the present industrial production problem.

Farm Women Are Taking Over Men's Work

On every farm and in every community, women are taking over more and more of the men's work. Housewives are going into the fields to operate tractors and trucks and all manner of mechanized farm equipment. Girls are working at their mothers' sides and are helping their brothers in gardens and barnyards. The neighbors are pitching in and helping out. Women living in towns located in rural areas are backing up their husbands in uniform by helping out in the great job of providing food for courageous fighters, for busy civilian workers, and to aid our allies.

Women are the key to assured food supplies for the duration. They will have a greater part in the planting and harvesting of the 1943 crops and a still greater share in the farm tasks of 1944. Many of these women are skilled workers in their agricultural occupations, but their efficiency can be increased by providing them with more suitable types of work shoes. Many of them are working at farm jobs outside their normal fields of activity. Their feet must be supported and protected so they can do their best work. Many are green workers, unfamiliar with farm conditions. Most of the latter are joining the food production brigades from the high schools and colleges and urban districts of the country. They must have suitable working footwear or they will not be able to carry on in the jobs they are needed for.

This is the shoeman's part in the drive to produce more food with fewer men on the farms—the shoeman must keep more millions of women shod for farm work than ever before and must do it better than ever before. "In one short year the United States conceivably could change from a land of abundance to a land of scarcity." This must not happen.

N. H. Employers Asked To Hire Women

"New Hampshire manufacturers must prepare now to replace practically all male workers between the ages of 18 and 45 years, largely with women, the advisory committee on industrial resources of the State Council of Defense warned this week.

The impending labor situation in the Granite State threatens to grow critical, the committee was agreed as it voted to have a sub-committee draft a bulletin which will be sent through the state industrial agent's office to all manufacturers, urging them to start training women immediately.

The importance of better work shoes for farm women is recognized by the leaders of those women. Miss Ruth O'Brien, chief of the division of textiles and clothing, Bureau of Home Economics, U. S. Department of Agriculture, in a letter printed elsewhere in this issue, says:

"This Bureau has for the past year been designing various types of work garments for women . . . In this connection I have been impressed by the serious lack of suitable shoes for women now going into industrial and farm work . . . extension leaders of rural home makers complain of the difficulty farm women have in securing satisfactory shoes for field and other farm work . . . Well fitting, sturdy, protective shoes are a necessity if these women are to maintain their health and carry this extra load . . . I am delighted to see that in your publication, Hide and Leather and Shoes, you are stressing the need of an immediate solution of this problem. We will be very glad indeed to do anything we can to help you in your efforts to get suitable shoes built for farm and factory workers and so widely distributed that they will be available throughout the country. *If this can be done, it will in our opinion be an outstanding contribution to the war effort.*"

Miss O'Brien's challenge to the industry to provide suitable footwear for women farm workers is not an idle one. She says, "the war has not only increased women's work with poultry, farm gardens, and dairy cattle, but also actual field work such as driving tractors, plowing and cultivating, and other work formerly done solely by men."

Elma E. Van Horn, assistant in home economics information of the Agriculture Department's Bureau of Home Economics, says:

In the Days Ahead

we all face delays, shortages, even worse; which will strain relationships built upon a business lifetime.

Mutual helpfulness and cooperation is needed. We have already converted the greater part of our organization to the job of winning the war. It's our combined job to "keep 'em rolling."

Let's get together

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LYNN MASS. U.S.A.

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Columbus, Ohio Cincinnati, Ohio
Chicago, Ill. Milwaukee, Wis.
Kitchener, Ont. St. Louis, Mo.
Westfield, N. J. Los Angeles, Cal.

"There is no type of farm work that women haven't taken over to some extent, according to Mrs. Minnie Fisher Cunningham, information specialist of the Agricultural Adjustment Administration. She tells me that she has seen women at work in the fields—all over the farm—in her various trips."

Women Are Producing "Food for Freedom"

Here are some "true stories" of women on the farms who are fighting to produce more "food for freedom," women whom Mrs. Cunningham met on her trips through the farm areas this summer; women who are replacing men now in the armed forces; women who are working shoulder to shoulder with the men at home; women who are increasing last year's efforts.

"The new feminism is sweeping the prairies," says Mrs. Cunningham. "Not the old kind, demanding rights and privileges, but a new edition, asking for work and responsibility." Let this "new feminism" be interpreted by some of its exponents with whom Mrs. Cunningham visited.

Mrs. Thelma Fleming is a youthful farm housewife near Milford, Iroquois County, Ill. "Our hired man enlisted in the Army," she explained. "My husband is able to manage without him by doing all the field work on our 250 acre farm himself, but he needed someone to do the chores. Most women are making some contribution to the war effort —Red Cross work and the like. I would rather do farm work, so I've taken over the hired man's chores. It means five hours' work a day, feeding and milking five cows, cleaning the barn, feeding the hogs, and taking care of 700 chickens, but I like it. . . . Farms are war factories, too. Our product is food, which is mighty strong ammunition both in peace and war."

The red, white, and blue "Food for Victory" sign displayed prominently at the Tazewell County, Ill., farm of Mr. and Mrs. Ora Krohn really means something. With 1,050 acres in the farm, out of which 550 are crop acres, this farm couple has a big job operating it by themselves. To be sure to produce their "food for victory," Mrs. Krohn operates one of their two tractors while Mr. Krohn operates the other. Mr. and Mrs. Krohn, John Flexenhar, Mrs. Krohn's father, and the landlady, Mrs. Jones, are contributing all they can toward agriculture's war effort.

Will Depend on Women

"Our country will depend more and more upon its women to produce the materials with which men fight."—George W. Taylor, War Labor Board.

Any woman would hesitate a long time before giving up a position as saleslady selling grand pianos at $3,500 each to go on a farm and manage it—but that is just exactly what Mrs. Helen Burris did 12 years ago in Nodaway County, Mo., when her father's health failed him. Since his death she has operated the farm successfully. Last year the selective service chose her hired hand and she found replacements difficult to obtain. She has worked out some of her problems and is increasing production on her farm. Mrs. Burris is capable of doing any of the work on the farm from driving a tractor to vaccinating hogs. She's not worried about having any Axis farmer beat her output.

Another Missouri farm woman who has accepted the Axis challenge is Mrs. Raymond Lykins of Gentry, Mo. Mrs. Lykins' poultry flock produced 912 dozen eggs in 1941; is now nearing her 1942 goal of 1,475 dozen. The garden which she and her nine-year-old son take care of has been increased from an acre to an acre and a half. Due to the labor shortage she helped with the preparation and planting of the field crops and with the haying and harvesting. In addition, she's already done her generous share of work in the greatly expanding canning program of 1942.

Her Foot Slipped

Eighteen year old Wilma Dehn of Henry County, Mo., is the mainstay on the Dehn farm now for her two brothers are in Uncle Sam's fighting forces. Wilma "makes a mighty good hand, too," her dad testifies. Mr. Dehn is getting his harvesting done "with mama and Wilma on the tractor and binder." Wilma had never worked outside before, but she "caught on quickly" to the field work and she has the entire care of the farm's 11 milk cows as well as all the other things she does. The only trouble Wilma has ever had was early in the spring when she was hauling fodder to feed and slipped and fell through the hay frame. "Soldiers get hurt, too, but they keep right on fighting," was the only thing Wilma had to say about the incident. Perhaps if she had been wearing more suitable footwear the accident would not have occurred.

"I can disc, drag, sow oats, plow corn, help with the haying, and do the chores if it's necessary. I've done it before and I'll be willing to do it again if it will help to beat the Axis." That's the way Mrs. Olive Hanson, who has operated an 80 acre farm in Iowa for 15 years since her husband's death, feels about the food for freedom campaign.

Sara Ellen Orr, 18 year old Indiana farm girl has completed her first year in home economics at Purdue University and this summer she replaced a hired hand and helped the tenant on the William Orr farm near Warsaw. The farm is located near the Kingsbury Ordnance Works, which has drawn most of the farm labor, including women, away from the farm, but Sara Ellen saw the crops planted and harvested this year—her contribution toward Victory.

These are experiences selected at random, telling the story of women on the farm working for freedom by producing food for freedom. They make the need for suitable shoes for these women seem more real and more imperative and they show why Miss O'Brien says that good shoes now for women farm workers will be "an outstanding contribution to the war effort."

The sixth article in this series will be published in the November 7 issue. The previous articles reported the extent and buying power of the women's work shoe market; the opinions of hundreds of shoe manufacturers and distributors; the needs and wants of industrial workers; and the market for women's work shoes in agricultural fields. The remaining articles will discuss actual specifications and designs of footwear for women workers.

Uncle Sam's War Chest

calls for a BILLION DOLLARS A MONTH in War Bond sales. Do *your* part by buying the limit . . . and by encouraging your employees to set aside *at least* 10% of the gross payroll in War Bonds, through the Payroll Savings Plan!

EVERYBODY EVERY PAYDAY AT LEAST 10%

be made. Will this stop the importation of Mexican woven huaraches?"

I cannot answer that. According to the order there is no provision made for foreign importation. It will be considered.

"Can I make shoes using duPont or zapon imitation leather using belly sole leather in platform type low heel play shoes?"

Certainly if they are one tone. Yes, if they are monotone shades, you can make shoes out of leather or synthetic materials. You can make leather soled shoes out of zapon or other synthetic material, provided you don't violate the six allowed colors—provided you don't combine two colors in one shoe.

"Is specific authority from the Director generally needed when each leather pattern is converted to a cloth pattern or when a pattern is changed to effect economy in the amount of leather used?"

The order clearly provides for correcting the patterns you own to meet with the restrictions in the order and it would not be very cricket to get a lot of correspondence on this score, unless it were absolutely necessary. We suggest that you think clearly before writing, asking questions that really are not significant.

"Where a majority or part of the production of a factory has consisted of sandal type patterns which may be considered woven shoes within the meaning of M 217, may such factory replace these patterns in order to conform with the portion of the order by replacement of non-woven patterns?"

Yes, I think his request would be granted, but he will have to make his case clear, be specific in citing individual position.

"Does C-10, that portion of the order pertaining to more than one full leather sole in Goodyear welt shoes, refer to non-critical leather other than regular sole leather, especially when the two thicknesses of leather combined equal not more than the regular sole thickness?"

The order does not refer to non-critical leather. You can make double sole shoes if the midsole is of a non-critical synthetic material on any type of shoe. The order specifically points out what is permitted.

"Does a row of imitation leather lacing on a vamp come under the restriction of woven vamp? The illustration is a moccasin type of shoe with the leather lacing over it."

Yes, that is a laced vamp. Lacing woven through perforations or woven around a raised moccasin seam or shoe laces used through the eyelets to hold the shoe on the foot that are of different color are disallowed.

"Under Order M-217, on shoes sold prior to Sept. 12 which can be completed by Oct. 31, are nailheads allowed where the nailheads are gold, or is this considered two-tone?"

That is considered two-tone, definitely.

"May Manufacturer A purchase from Manufacturer B his discontinued or excess stock of patterns, dies, and so forth?"

The order clearly states that no manufacturer may add to his equipment, regardless of the source from which it comes.

"Are bow manufacturers allowed to make and sell new styles of bows?"

The order specifically states that the pattern restriction also applies to bows. No new bow patterns are allowed other than those used or on order prior to Sept. 10, 1942, and then only if they comply with the restrictions in the order.

"Are shoe manufacturers allowed to buy patterns or dies to manufacture shoes of identical style but different heel heights and lasts?"

No, under the restriction, no new patterns are to be added. That would be a full set of patterns. There is no restriction on using a pattern that you own that fits over various lasts if your patterns are graded that way.

"Are shoe manufacturers allowed to buy additional sizes of lasts and patterns now in use?"

Shoe manufacturers are allowed to replace and to add to their lasts that have been definitely used prior to Sept. 10 in making full run of sizes in shoes. Adding lasts to replace broken lasts or adding lasts because of standardization making it possible to make more shoes on a given last is permitted.

Agricultural Department Chief "Delighted" with Shoe Study

A Letter From

Ruth O'Brien

Chief, Division of Textiles and Clothing, Bureau of Home Economics, U. S. Dept. of Agriculture

Sept. 21, 1942.

Mr. Elmer J. Rumpf, Publisher,
Hide and Leather and Shoes
300 West Adams Street,
Chicago, Illinois.

Dear Mr. Rumpf:

This is to express my appreciation of the courtesy you and Mr. Bryan showed me when I called at your office recently to discuss the problem working women are facing in connection with shoes.

This Bureau has for the past year been designing various types of work garments for women. Our first concern has been for farm women, but we also have designed garments now being used widely throughout the country for women working in munition, aircraft, shipbuilding, and other war industries. A copy of one of our publications on this subject is enclosed. In this connection I have been impressed by the serious lack of suitable shoes for women now going into industrial and farm work.

Through the Extension Service of the Department of Agriculture this Bureau has direct contact with the majority of rural homemakers in this country. During the past month the Department has held four regional conferences—at New York, Birmingham, Chicago, and Salt Lake City—for members of the extension staff directing the clothing work of this service. They were attended by official representatives from every state in the Union. I participated in all of the conferences and was impressed by the fact that at everyone, these extension leaders of rural homemakers were complaining of the difficulty farm women have in securing satisfactory shoes for field and other farm work. I wonder if you are aware that the intensified food production program the Department of Agriculture has underway is increasing tremendously the amount of farm work being done by women. It has not only increased their work with poultry, farm gardens, and dairy cattle; but also actual field work such as driving tractors, plowing and cultivating, work formerly done solely by men.

Well fitting, sturdy, protective shoes are a necessity if these women are to maintain their health and successfully carry this extra load. In addition, the increased emphasis on home preservation of food and the present scarcity of hired help has added to the amount of household work all women, but especially farm women have to do. This also brings a need for comfortable indoor work shoes. In addition, I know you are well aware that hundreds of thousands of women are going into factories, and have thus increased the demand for safe footwear.

I am delighted to see that in your publication, Hide and Leather and Shoes, you are stressing the need of an immediate solution of this problem. We will be very glad indeed to do anything we can to help you in your efforts to get suitable shoes built for farm and factory workers and so widely distributed that they will be available throughout the country. If this can be done, it will in our opinion be an outstanding contribution to the war effort.

Enclosed you will find a copy of Miscellaneous Publication No. 469, "Shoe Sizing and Fitting," which may be of interest to you.

Sincerely yours,
Ruth O'Brien, chief
Division of Textiles and Clothing
Bureau of Home Economics, U. S.
Department of Agriculture.

Footwear Prospects for 1943

THERE are sufficient leather and shoe supplies on hand or in prospect in the United States to meet all essential requirements through 1943, even in the face of rapidly expanding military needs of the armed forces and increasing lend-lease demands.

The Government has already taken steps to safeguard U. S. military requirements. War Production Board order M-80 reserves all first quality sole leather. Because of shortages of shipping facilities, imports of hides and leather are regulated under M-63. But the most important protective regulation is M-194, the monthly allocation plan set up in July, 1942, by the WPB, under which each tanner now receives a monthly quota of hides of specified grades. This procedure was a direct result of (1) the curtailment of imports of hides, particularly from Argentina, by the shipping stringency, and (2) the rapidly increasing military needs for shoes.

When war became imminent in the fall of 1941, retailers began to stock up heavily on staple types of footwear. Fearing rapid price increases and anticipating difficulties in obtaining ample supplies later, they purchased in unprecedented quantities, but when this buying wave continued through the opening weeks of 1942, manufacturers considered it ncessary to curtail credits. Faced with the necessity of obtaining ready cash and realizing for the first time the extent to which they had made speculative purchases, the retail trade saw cause for some concern.

There followed a quick reversal of inventory policy, with many retailers suddenly beginning to visualize possibilities of price controls, inventories restrictions, style elimination, and other possible regulations which might affect their operations. Many decided that the time was opportune to reduce inventories. In order to stimulate extra-pair sales to their customers, various sales devices were used. The reasoning which caused retailers to stock up, was used in turn by many to get customers to buy. As a result, large numbers of extra pairs of shoes purchased by customers in this stimulated sales campaign are still unworn in their closets, thus constituting not only a partial cause of the present slump in retail shoe sales but also a reserve for consumers against difficulties in getting shoes later on.

American Shoe Consumption Is Highest in the World

Mass production of shoes was originated and most early developed to a high degree in the United States. Hence this country has been for many years the leading leather footwear producing country. A record output was achieved in 1941, during which United States production was almost 40 per cent of the total world supply. Many factors have brought about this situation, the most important of which are the complete mechanization of the industry, ample supplies of skilled labor and necessary materials, together with a large domestic demand based on our growing population and a high per capita consumption. Our per capita shoe takings (the nearest measure of actual consumption) was about one-half again as high as that of Canada and Britain (see Table 1).

The data available are not complete enough to show clearly just what American leather footwear consumption per wearer really is. Over the decades the changing age composition of our population has meant fewer young people who go barefooted part of the time, and perhaps also, because of increasing levels of purchasing power, fewer adults who go barefooted. Moreover, those who wear little or no leather footwear may be adequately shod with footwear of other types, notably rubber, the output of which has spurted in recent years. A fair idea, however, of American shoe consumption may be obtained from Table 2. Consumption, as measured by per capita shoe takings, has changed only slightly over the last half century. In the decade of the thirties, it was almost exactly the same as in 1899; 1940 consumer takings per capita were almost identical with those of 1909. In making comparisons of quantities consumed over long periods, however, one should not lose sight of the improvements in quality and comfort that have occurred but cannot very well be measured.

An article by

J. G. Schnitzer

Digested from "Survey of Current Business"

Consumer Stocks Now at High Level

Consumer takings per capita of all shoes in 1941 were at a new high record of 3.43 pairs. This was especially true of women's and misses' shoes. Men's shoe takings per capita were at a high for recent years, exceeded only by those of 1923 and 1924. Consumption experience of the last 21 years is shown in Table 3. Only boys' and youths' shoes have failed to show marked gains.

The 1941 rate of per capita con-

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SHOE FACTORY

A MONTHLY DEPARTMENT OF HIDE *and* LEATHER *and* SHOES

Working Women Tell What Kind of Working Shoes They Want

By Alfred Henderson

Women workers take the stand and tell what kind of shoes they want for work wear. The results of the consumer survey reported in this article shatter many a cherished illusion of the shoe trade. Thousands of women in various occupations were interviewed by "Hide and Leather and Shoes" to obtain the revealing information reported here.

A NUMBER of cherished illusions of the women's shoe business are being shattered by the findings of HIDE AND LEATHER AND SHOES' study of the potential market for women's work shoes, and of the footwear which should be properly classified in this division. The elimination of these illusions and the abandonment of numerous outworn prejudices is necessary if any serious progress is to be made towards supplying working women with suitable footwear for their working hours, properly classified and identified as such.

First of all it has to be more generally recognized that the employment of women in large numbers and in many varied occupations is not just a passing phase of wartime necessity. It was pointed out in the first article in this series (H&L&S. June 13) that a large percentage of women have been "gainfully occupied" for many years and that although their number has been sharply increased because of the war, pre-war occupations employed over 10 million women. Wartime levels will soar to perhaps 50 per cent above that mark; post-war trends will decline, but will probably not recede to the pre-war mark. Yet there is no division in the women's field between dress and work type shoes, such as there is in the men's field, and no footwear (with the exception of nurses' shoes) which is specially designed and constructed for the needs of working women, and so identified. No concerted effort has ever been made to produce for and sell to women the kind of work shoes they need.

Statistics prove that employed women are an important part of our national economy and a vast potential market for specially designed and constructed work shoes exists.

It is largely because of a failure to recognize these fundamental facts that the great army of women workers has been the most improperly shod group of women for many years, and continues to be the most improperly shod despite the increased attention now being given to the clothes worn by employed women during their working hours.

A second stumbling block to the development of suitable work shoes for women, and for the cultivation of this potential market, has been the hesitancy of shoemen to discuss such mundane subjects as work shoes for women and the fact that many shoemen are dubious about the feminine reception of footwear with so prosaic a name as "work shoes." In their anxiety to develop glamorous fashions, the makers of women's shoes have often overlooked the fact that millions of their customers only buy "glamour footwear" after they have earned by personal labor the money with which to do so. The fallacy of the reasoning against the commonplace and sensible use of the term "work shoes" to describe shoes that are specially suitable as women's occupational footwear has been strikingly demonstrated since this study began. Until then, the term "women's work shoes" was mentioned only in whispers, if at all. Today, it appears almost as commonly in trade and consumer publications as any other shoe term.

Another fault that has stood in the way of proper development of women's work type shoes has been a general trade and consumer lassitude. Many manufacturers and distributors held no strong prejudices against women's work shoes; in fact they thought there might be some advantage to be gained if such a classification was commercially established and accepted. But almost without exception they wanted someone else to take the first step. The commonest expression heard in the trade by HIDE AND LEATHER AND SHOES' correspondents who interviewed manufacturers and distributors throughout

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the women's field was: "We'll make work shoes for women, if it is shown that there is a need and a demand for them" and the second most frequent comment was: "We'll make them, and we'll call them work shoes, if the others will."

Much of this lassitude was overcome during the early part of the present study. The views of the shoe trade which were reported in the second and third articles of this series (H&L&S, July 4 and Aug. 1) may be briefly summarized by stating that they showed willingness on the part of most women's shoe manufacturers to cooperate in establishing a women's work shoe classification, and eagerness on the part of many to do so.

The need for women's work shoes has been proved; a large potential market for them has been analyzed; the willingness of shoemen to undertake the job of developing and promoting women's work shoes has been shown.

But what do women think?

Unless it is evident that consumers will accept suitable footwear that has been properly classified as work shoes, there is no object in proceeding further. Do women want work shoes? Will they buy them? What will they pay for them? What kind of shoes do they want in this classification? How much interest is there among feminine consumer organizations in such shoes?

Consumers Are Ready For Women's Work Shoes

These are among the questions to which HIDE AND LEATHER AND SHOES has sought the answers. It found that government agencies concerned with consumer interests are anxious to cooperate in every way. It found prominent national women's organizations interested and eager to obtain more information. It found prominent employers willing to cooperate in any way that they could to interest their female workers in the subject of better footwear. It interviewed women in diversified occupations and found them receptive; further, they had very clear ideas generally as to just what they wanted most in work shoes. The response proved definitely that the theory that women won't accept "work shoes" and that they are only interested in glamour and fashion whether on the job or not is outworn.

Space will not permit reporting in detail the interest that has been shown in this study by Government agencies, employers, and women's organizations, but it is important to shoemen who are interested in developing this classification of footwear to know that even the preliminary discussion which has already been created by the incomplete reports thus far published has established a cooperative feeling and definite interest among influential organizations directly concerned with the consumer aspects of women's work shoes.

She can't forget Pearl Harbor! But if this girl slips and loses time from her work, the vitally important bomber on which she is working may be delayed in its trip over Axis military objectives. Proper work shoes will help to speed the production of fighting machines.

OEM Photo by Bransby

Among the Government agencies which have expressed interest and in many cases have actively cooperated in the conduct of these studies are various bureaus and sections of: Office of Price Administration; War Production Board; Department of Commerce; Department of Agriculture; Department of Labor; War Manpower Commission, and Federal Security Agency, Office of Education.

Among the consumer organizations which have similarly expressed interest in the further development of this study of women's occupational footwear are: National Council of Women; Women's National Institute; American Standards Assn.; American Nurses Assn.; Consumers Research, and the Metropolitan Life Insurance Co.

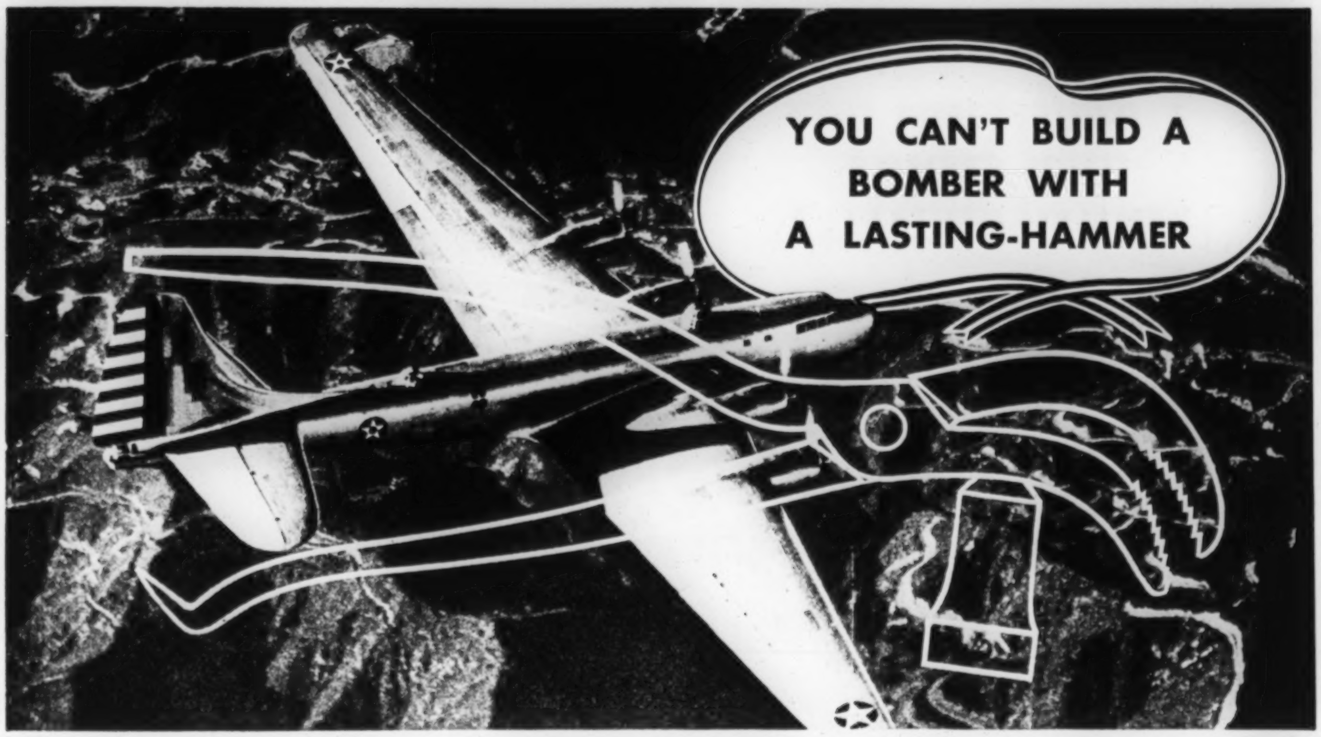
Employers have also expressed an interest in the study and in the availability of safe, comfortable, and efficient footwear for their women workers. Among these are the General Electric Co.; Munsingwear, Inc.; Vulcan Corp.; Torrington Mfg. Co.; Kistler Leather Co.; New England Confectionery Co.; Alfred Johnson Skate Co.; The Ohio Leather Co.; Western Newspaper Union, and many others.

But what do the workers think? They will pass final judgment on women's work shoes. They will pay the bill for these shoes. What sort of shoes do they want for work wear, and how much will they pay for them?

To get this information at first hand, HIDE AND LEATHER AND SHOES interviewed thousands of women workers. In this consumer survey, care was taken to obtain sample opinions from workers in a wide field and a representative diversity of occupations in proportions to correspond to the ratio of employment in those occupations as compared with total employment of women.

Survey Based on Occupational Conditions

It is obvious that the footwear needs of women on one type of job will not be the same as those of women on an entirely different type of job. It is possible, however, to study the occupational conditions affecting employed women as a whole and to adopt footwear to meet those occupational needs by segregating female employment into a relatively limited number of classifications. For this reason, it is far more important


YOU CAN'T BUILD A BOMBER WITH A LASTING-HAMMER

but — you can cut down unnecessary lasting-room waste by following these four simple rules:

Check up on your box toe sizes. Be sure that you are not buying and *wasting* valuable box toe material in sizes that are needlessly large. Properly sized box toes cost you *less* and actually improve your shoemaking.

Order as needed. Do not overstock. Waste occurs when large surplus stocks develop on novelty sizes that have *no* resale market.

Use *white* soft toes in *white perforated* shoes. Otherwise use a Beckwith grey material (stainless) for all softies.

—and most important—Use a Beckwith box toe for maximum performance. Beckwith toes eliminate lost time and wasteful replacements and in the long run they cost *less.*

All Beckwith salesmen and agents will be pleased to co-operate in studying your conditions and recommending, wherever possible, economies that will save you money and preserve valuable resources essential to the shoe industry.

BECKWITH BOX TOES

BECKWITH MANUFACTURING CO., DOVER, N. H.

VAPOR CONDITIONED

SHERBROOKE QUEBEC CANADA
AGENTS: GEO. A. SPRINGMEIER CO., CINCINNATI, OHIO

MILWAUKEE, WISCONSIN
WRIGHT GUHMAN CO. ST. LOUIS, MO.

The smiling girl at the left is cutting parts for storage batteries for submarines, tanks, and rough riding reconnaisance cars. America's fighting men are counting on her support, and proper work shoes will keep her smiling and on the job.

The girl at the right is turning out parts for Uncle Sam's fighting planes. If she slows down because her feet hurt, or takes time off to nurse a foot injury, the enemy is pleased. Good work shoes are as essential to women workers in war industries as jackets and protective headgear—but half of the women workers questioned by "Hide and Leather and Shoes" are wearing improper, uncomfortable, and unsafe shoes at their work.

OEM Photos by Bransby and P.L.M.R.

in planning a line of women's work shoes to study the market's needs on a basis of *types of occupations* rather than on an industry basis, because occupational requirements vary within industries and at the same time overlap from industry to industry.

This basis of occupational study was used by HIDE AND LEATHER AND SHOES in making this survey, and the replies were secured from workers engaged in occupations representative of those in which women are engaged in substantial numbers, with a few important exceptions.

Women who are working in unusual fields where their footwear needs are well defined but not typical of the group as a whole were not interviewed. No study was made of consumer opinion in the nursing profession, because this is the one field of employment that has already been provided with specially designed occupational footwear. Nor was any study made among domestic workers, as it is believed that the footwear needs of domestic workers and housewives will be suitably met by creating an appropriate line of work shoes for women employed in industrial and commercial occupations.

The footwear needs of women in agricultural occupations (which overlap with those of rural housewives and domestics) are not considered in this article as they are considerably different from those of women engaged in industrial and commercial pursuits. A study of the requirements of large numbers of women engaged in agriculture will be reported in a later article. The needs of farm women who do not fall within the Census statistics on female employment in agriculture will also be considered in this later report.

Half of Women Workers Wear Improper Footwear

It has been pointed out in previous articles that working women are not wearing suitable footwear on the job, despite the attention that has been given in recent years to suitable clothing for working women. The women workers questioned in this survey corroborated this point:

Regular dress shoes which have become too shabby or outworn for street wear are worn to work by 46.23 per cent of all the workers questioned. This simply means that nearly half of these women are wearing shoes on the job that were not originally designed for work wear, that were unsafe, unhealthy, and uncomfortable for such wear even when they were new, and which are still less satisfactory when finally worn to work.

The other half (53.77 per cent to be exact) of these women represent a direct contradiction to the theory that women will not buy work shoes.

They are *already* buying an extra pair of shoes for work wear, and are selecting these as best they can from the footwear that was originally designed for other purposes and is usually identified by such terms as playshoes, casuals, sport shoes, etc. These terms cover a wide field and women who are now buying these types for work wear say the terms are confusing when they shop for work shoes—shoes to be worn during their working hours and not for play or sport or casual street wear.

Would Pay More for Work Than for Dress Shoes

What price would these working women be willing and able to pay for shoes that were designed and made esepcially for comfort, safety, and durability as properly identified work footwear?

Up to $2.50 said 2.8 per cent; 23.2 per cent would pay between

US

Planes... guns... ships and shoes

American industry is face to face with its greatest undertaking. That our ingenuity and determination will surmount all obstacles and accomplish the seemingly impossible goes without question.

There's a call for planes and guns and ships—and shoes for the men who man them. It takes good shoes; shoes that can "take it" and it takes leather to make a good shoe *Good*.

THE UNITED STATES LEATHER COMPANY

NEW YORK • BOSTON • CHICAGO • ST. LOUIS • RICHMOND • CINCINNATI

McADOO & ALLEN
Philadelphia

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CUT SOLES HILLIARD & MERRILL DIVISION BOSTON

$2.51 and $3.50; 32.6 per cent would pay $3.51 to $4.50; 34.3 per cent would pay $4.51 to $6.00; and 7.1 per cent would pay over $6.01; 1.8 per cent did not answer this question.

An analysis of these answers proves that women will generally pay *more* for proper work shoes than they are now paying for dress shoes. Based on a survey of over 40,000 women, adjusted to conform to present retail price levels in the women's shoe field, it is estimated that retail sales of all women's footwear fall into the following price ranges: Up to $2.50, 20.85 per cent; $2.51 to $3.50, 29.14 per cent; $3.51 to $4.50, 21.25 per cent; $4.51 to $6.00, 9.66 per cent; over $6.00, 19.10 per cent.

Oxfords are predominantly in the lead among the types of footwear commonly worn by women workers, the survey shows. Only one per cent of the women interviewed failed to indicate the type of shoe now being worn. Of those who did answer, 4.8 per cent indicated more than one type.

The types of shoes now worn by these women are shown by the following percentages: Oxfords, 74.5 per cent; pumps, 10.7 per cent; boots, .01 per cent; orthopedic, 2.7 per cent; nurses', 4.6 per cent; safety, 1.6 per cent; "just any kind available," 9.7 per cent.

Low Heels, Medium Weight Uppers, Leather Soles Lead

Low heels are now the most popular, followed closely by medium heels. Only .3 per cent of the workers did not answer this question, while 8.1 per cent said they are wearing more than one heel height. The replies were as follows: Low heels, 59.0 per cent; medium heels, 42.2 per cent; high heels, 6.6 per cent.

Asked about the points which they felt would be most desirable in a specially designed work shoe, 68.8 per cent of the replies mentioned low heels; medium heels were named in 56.1 per cent; and high heels in 2.3 per cent; 30.3 per cent specified more than one height; and 3.1 per cent did not answer. In this connection, it is interesting that a number of women said they could not wear too low heels, because they were not satisfactory on machine operations requiring the use of a foot treadle, and a number of workers stipulated that they wanted rubber heels, although this question was not directly asked.

Light weight uppers for work shoes are wanted by 26.9 per cent of the workers; medium weight by 37 per cent; and heavy weight by 0.5 per cent; while 35.6 per cent did not express a preference.

Leather soles were far in the lead as preferred by women for work wear: 69.8 per cent specified leather soles; 21.1 per cent want rubber soles; and 0.5 per cent want wood soles. 8.6 per cent did not answer this question.

Women Workers Want Comfort First; Style Last

In direct contradiction to the trade theory that working women place style above all other desirable qualities, even in work shoes, style came out badly in this survey, while comfort led the list of desirable qualities.

Comfort was specified in 86.1 per cent of the replies; safety in 54.3 per cent; durability in 66.6 per cent; and style in only 38.9 per cent.

The individual comments of the women workers were even more revealing than the statistical compilation of their replies. They ranged all the way from that of the worker who said: "Any shoe is alright for me; I'm not fussy," to comments that included carefully detailed specifications of the worker's footwear dream. Space will not permit quoting all of these comments here, as hundreds had specific suggestions to offer, but the following have been selected for their interest and their pertinence to the study—and a few were chosen for their humorous aspects.

Difficulty of securing suitable shoes for work wear in good size ranges was mentioned frequently. One worker said: "It depends largely on the width of the foot whether you can buy medium priced shoes. I wear a triple A and it is very hard for me to find work oxfords as narrow as this in a low priced shoe." This worker reported she is now paying $3.50 for her shoes and would pay $3.50 to $4.00 for more suitable work footwear.

Another worker, who is willing to pay $6.50 for her work shoes, asked: "Do you make a work shoe with style and comfort for a size 8½ AAA or AAAA width and narrow heel?"

The relation of size and fit to comfort was emphasized repeat-

Shoes like those shown at the right are comfortable for standing, but open toes and heels invite trouble from the many hazards that are present in every industrial plant. Shoes like those worn by the girl at the left give no support to the feet and offer absolutely no protection from falling objects, protruding nails and splinters in benches, floors, etc.

H&L&S Photos, Passed by War Department

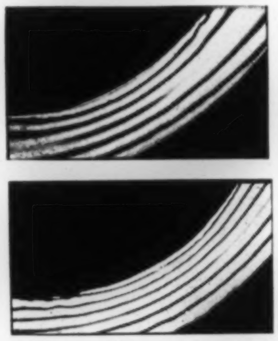
HOW MANY "SHOE-MILES" TO BERLIN AND TOKIO?

A LOT OF BEST QUALITY LEATHER IS NEEDED FOR 8 TO 10 PAIRS PER U. S. FIGHTING MAN

Today, U. S. soldiers and sailors are getting most of our production of England-Walton FIBRE-SORTED soles. Like all leather suppliers, we must cooperate *first* with the Armed Forces to create the tremendous "shoe mileage" America needs to win.

But remember — *all* grades of England-Walton soles are England-Walton FIBRE-SORTED, and those grades available for civilian use still give you fibre-sorting's proven benefits of more even flexibility and wear.

THE CAMERA'S EYE REVEALS SECRET OF EXPERT FIBRE-SORTING



These pictures, taken with polarized light, show how the strain-lines vary in unmatched soles. Experienced E-W fibre-sorters, with knowledge of leather's internal structure, can tell at a glance whether such dissimilarities exist. After long years of this exacting work, they know what part of the hide each sole came from, and thus are able to match them more accurately.

When the war is over, their EXTRA skill will again be available in E-W's best selections to give Manufacturers and Retailers the EXTRA sales point that E-W Fibre-Sorting provides.

ENGLAND WALTON
fibre-sorted soles
CUT SOLES AND ... LEATHER
PURE OAK BARKTAN...

England Walton Division

A. C. Lawrence Leather Co.

Boston, Camden, Peabody, New York, St. Louis, Columbus, Milwaukee, Los Angeles, San Francisco
Ashland, Ky., Newport, Tenn., Hazelwood, N. C.

edly in the workers' comments.

One said: "I wear a 5 A shoe and I am not able at the present to get them unless I order them special and pay $3.00 more than the regular price." (She is now paying $8.95 and thinks $6.50 would be a more reasonable price for what she wants.)

Another worker, who is willing to pay $4.00 for work shoes, said: "My main trouble is the counter is never narrow enough in cheaper shoes; also counter is usually stiff and too high."

"Any 4B salesman's samples would be welcome," one worker said.

Another commented: "I want light weight and cool shoes of soft leather or its equivalent. I'm not hard on shoes but have an exceptionally hard time getting a good fit. I would suggest that more size 6 AA shoes be made in each style."

Sizes Are Hard to Get

Two other workers have found it difficult to obtain the sizes they wanted. One said: "A 6AAA is very hard to get in a low heel shoe, so I wish they would make more of them." The second asked: "Please forward me a 9B—any shoe. I find it difficult to secure this size in a shoe."

"Correct size is difficult to purchase," another worker finds, adding that "the price is too high when shoes are made to order." This worker is now paying $6.00 and $7.00 for shoes and wants to find a suitable work shoe in her size at $6.00.

Another worker wants "a perfect fit and choice of two or three different sizes (at $8.00) as I have great difficulty in obtaining a shoe in my size." Still another reported: "I wear a very narrow width and I find that they are not available in low priced shoes." This worker is willing and able to pay $4.00 to $5.00 for her work shoes.

A plea for comfort dominated the response of the working women. "Just comfort" begged one, and another asked: "Please make a shoe that does not hurt my corns, and have it perforated." A third said she would pay about $5.00 for "a shoe that will give me good support and long wear, take off my legs the strain from long hours of continual standing." Still another is looking for "a shoe with a heavy sole so that when I sew all day the balls of my feet will not burn."

Open Toes Not Liked

One worker wants "open toes for more comfort," but she was overruled by a strong sentiment against open toed shoes. Another seeker after comfort (at $4.00) asks for "soles that are not stiff as they make feet sore, and with plain toe and long vamp. Being this way, they do not bother feet that are tender. Soles should not be too thin for anyone required to be on their feet eight hours."

Permission to Reprint Work Shoe Articles

To insure against misinterpretation of the material which is being published in Alfred Henderson's series of articles reporting "Hide and Leather and Shoes'" study of women's work shoes, these articles have been copyrighted and all rights are reserved by the Hide and Leather Publishing Co.

However, permission to reprint or to quote from them will be gladly given on request by publications interested in this study. Such permission has already been granted in a number of instances. The "Haverhill (Mass.) Sunday Record" and the "Brockton Daily Enterprise" are among the newspapers which have printed digests of some of the articles in the series.

The General Electric Co. asked for permission to reprint the material in eight plant newspapers.

The Mason Shoe Mfg. Co., Chippewa Falls, Wis., was given permission to publish an illustrated digest of the articles in its house organ going to shoe salesmen.

"Shoe Service" magazine is reprinting, by permission, the illustrated article which appeared in the Aug. 1 issue of "Hide and Leather and Shoes."

Permission to use the material as desired has also been granted to a number of consumer service branches of Government departments and several women's groups.

"A shoe with a moccasin toe seems most comfortable," one worker said, but others disagreed and several urged that work shoes be made with as few seams as possible so that there would be no ridges to chafe their feet after long hours of wear under working conditions.

The need for good arch supports was emphasized by many of the workers, while others stressed a desire for "shoes that would be cool on your foot."

"Cooler shoes" for work wear were stressed by a number of the workers, who suggested perforated summer shoes repeatedly. Open toed shoes, however, were definitely in disfavor. "No toeless or heelless shoes—they are too hard on the feet. I won't even buy them for dress," commented one worker, summarizing the viewpoint of many others who expressed their opinions in this survey.

"Will they be making rubber boots next year?", asked one worker who has evidently been confused by newspaper interpretations of rubber footwear regulations.

Although the workers plainly indicated that style was a far less desirable attribute for women's work shoes than others, they were not unmindful of the values of good appearance in their work shoes. One girl succinctly expressed her vote for a "sporty model" at $4.00. Another, who is now paying $5.00 to $7.00 for her shoes said: "I like a shoe which is comfortable but also good looking, one which has a good arch support and heels of medium height. Do not like the appearance of some health model shoes where style is entirely sacrificed to comfort."

Good Appearance Sought

Another reported: "Since I wear a large size I am interested in shoes that do not over-emphasize the size of my foot." A third, who is paying $7.50 to $10.00 for her shoes, and would pay the same for special work shoes, says: "A good shoe is one that is dressy enough for ordinary occasions but with a safe, medium high heel that is still wide enough to make walking safe. Have heard the complaint hundreds of times; 'Why don't they make a decent looking shoe that we still can walk in?' When a woman grows to middle age and takes on weight her balance is often not so good—often on account of weakened ankles—but she still wants to look well. But in order to be surefooted she has to wear a '*man's*' shoe! Why?"

A suggestion that might help to solve the problem of that worker is offered in the remarks of a younger woman who says: "We don't want a shoe that looks like an old ladies' design. We want something comfortable, but yet with some style to it. We young girls hate old looking shoes, so why not have two types—one for the older woman and one for the young girl?"

Appreciation of footwear quality and comfort was expressed by the worker who said: "When one is doing work that requires being on one's feet all day a good, sensible shoe should be chosen. Then the price you pay is not too much if you are comfortable, and the shoes give you good wear. Everyone who pays a high price for shoes looks forward to getting their money's worth as well as taking care of their feet."

A busy secretary said: "For work in an office I should like a shoe with a medium heel, preferably a tie or strap for good support and comfort, plus STYLE. Why is it that a shoe with a low or medium heel, which is the most comfortable, should be so lacking in style? Yet this is the case, and most women and girls would rather be uncomfortable working in a high heel shoe than to be comfortable in a low or medium heel shoe that is not a bit stylish. No matter what kind of work a woman is doing she still wants her feet to look neat and small, and they never do except in a high heel. I know it is hard to achieve these requirements in a low heel or sport shoe, but I do not see why a medium heel shoe has not as many possibilities as a high heel, and why it cannot be made as pretty, stylish, and flattering to the legs and feet as a high heel."

An interesting comment was made in widely separated plants concerning shoe laces. Several workers stipulated "good shoe strings" and "strings that stay tied" as requisites of good work shoes.

A keen observation was made by one worker who said that "usually the most comfortable shoe is not the safest for the feet. More safe shoes should be made for people who stand at their work all day."

A brief summary of other comments made by the women workers who cooperated in this study reveals a diversity of desires, most of which, however, could be satisfied by coordinating the various details into a relatively small number of basic designs.

Women's Institute "Vitally Interested" in Shoe Problem

Mrs. Grace Harriman, chairman of the exposition advisory committee of the Women's National Institute, expressed the organization's interest in "Hide and Leather and Shoes'" study of women's work shoes as follows:

"Our committee is vitally interested in new problems of women workers' clothing, including shoes, and feels that extensive educational work must be done now to interest women workers in shoes that will protect their health and safety on the job. . . .

"May I take this opportunity to congratulate you and your staff on the diligence and intelligence with which you approached the problems of women workers' shoes. In my opinion, it is this kind of thinking and planning which is going to be so helpful to both industry and the consuming public as time goes on."

The problem of finding shoes suitable for work wear on oily floors troubles workers who are confronted with this occupational condition. A number of workers are seeking "a shoe more durable for use on oily floors" and one observed that she wanted wood or leather soles "because rubber soles curl up after wearing them on an oily floor." Another, however, asserted: "I like rubber soles because they don't slip on oily floors and they wear longer."

"Shoes that hold their shape and that permit the foot to perspire freely" are sought at about $4.00 by one worker. Another wants "a shoe that's light enough so it won't wear out the feet of our stockings." A third says: "Oxfords bother my feet, and I need a high or medium heel to run my machine."

The economic factor was brought out by one worker who said: "The price I pay for my shoes depends on how much I make a week." This worker, like many others, reported that her average wages are at a high level and said that she would like to buy better work shoes than she had been wearing in the past. Another worker would pay $4.00 to $6.50 for good work shoes and wants "shoes with straps, rather than pumps or oxfords." A worker who is willing to pay $6.50 for her work shoes is looking for "shoes that stand wet weather as well as dry weather, with

Let's get down to
Brass Tacks

NOW—more than ever before—we in the shoe industry are faced with the job of making machinery last longer and produce more. To this end repairs should be made immediately when needed: the machines and attachments used for any job should be those best fitted to do that job fastest and at lowest cost.

If there is any doubt in your mind as to whether your machines are suitable or in perfect condition, call in a Boston Machine Works representative. He can help you.

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BRANCH OFFICES:
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good strong arches." She complains that "most shoes are too weak in the arches for general wear, especially in a low priced shoe."

Bluntly critical, a worker who is now paying $4.00 for her shoes, and would pay the same price for special work shoes, asserts she wants "more leather and less paper in my shoes." Another worker, with an evident appreciation of footwear quality, would pay $6.00 for her work shoes and wants "something durable and soft that gives you the satisfaction of knowing that your money was well spent."

A problem which probably troubles a lot of working women was brought out by one worker who said: "I find I have a lot of trouble with shoes I wear to work on account of the heels. Going up and down stairs I always scuff the backs and heels." This worker expects to pay $5.00 to $6.00 for her work shoes.

A conservation note was evident in one comment. "As a matter of economy I suggest leaving out the tongue in oxford ties. This will save leather, and without the tongue the shoe is much more comfortable." Another worker offers, as a comfort suggestion: "Elastic should be put around the upper part of the work shoes, just as it is used in dress pumps, thus getting a snug, comfortable fit."

The Safety Factor And Safety Footwear

As has been mentioned, special safety footwear and footwear adapted for special occupational conditions were not included in this study because of the specialized requirements. Also, there has been consideration given by the shoe industry to the development of specialized and safety footwear for this relatively limited group of women workers.

The safety factor is not disregarded by women employed in the more common occupations, however, nor by their employers. A number of employers are stressing in their safety programs the need for suitable footwear, kept in good repair, as an aid to safety. An example of this work was shown in the July 4 issue, in the photograph of a safety poster displayed in the plant of Munsingwear, Inc., Minneapolis, Minn.

Many of the women who took part in the survey of worker's opinions emphasized their desire for safe footwear—54.3 per cent of those questioned mentioning this as an essential requirement.

The Women's Bureau of the U. S. Department of Labor, in its recent booklet on "Safety Clothing for Women in Industry" has this to say about shoes:

"Much fatigue and nervousness can be laid to badly fitting shoes. If you suffer from chronic fatigue or pain in your feet or in the muscles of your legs, ask the plant physician or nurse to advise you about the right kind of shoes to wear.

"The correct shoe is long enough to place the ball of the foot in the tread of the shoe. The shoe allows for the natural spread of the toes, and fits snugly around the heel and instep. The heel is medium or low. The foot should always be measured with the standing weight placed on the measuring rule. The width should be fitted as carefully as the length. If deformities exist, exercise and mechanical devises will help.

"High or run down heels and thin or worn soles can be the direct cause of a fall. Well fitting shoes with low heels and good soles can help to maintain footing on wet or slippery floors.

"Falls are a major cause of women's injuries in industry; and they are especially serious, and result in much loss of time, among older women. Important causes of falls are wet, slippery floors and other evidences of poor factory housekeeping.

"Some occupations require the wearing of safety shoes. Usually this is necessary if there is any danger of dropping heavy material. They can be as comfortable to wear and as attractive in appearance as an ordinary shoe. Such shoes with reinforced vamps have saved the loss of many toes. Several nationally known firms make them in all sizes for both men and women.

"A specially designed foot protector for girls working in an optical glass department is a piece of aluminum curved to fit the top of the foot. This is protection to the instep and top of the foot against falling glass or other falling objects. Where workers handle acids, or where conditions of great heat or moisture exist, wooden soled shoes have been designed.

"Women who work where explosives are manufactured or handled must wear shoes with sewed or wooden pegged soles and heels with copper nails."

The bulletin lists footwear equipment necessary when the following occupational hazards are present:

Corrosive substances, alkalies, or acids: Rubber or chrome leather shoes with wooden soles and, in case of corrosives, with sewed sole.

Cuts: Chrome leather is advised for coat, apron, shoes, leg and arm protectors, and gloves.

Dermatitis: Clothing of rubber, possibly including rubber shoes.

Falling objects: Shoes with reinforced toes.

Falls or slips: Shoes with non-skid soles.

Hot liquids: Shoes opening at the side and made of chrome leather.

Hot materials: Wooden soled, chrome leather shoes without front lacing.

Moisture: Chrome leather or rubber shoes.

Punctures and blows; rough, sharp objects: Chrome leather shoes with reinforced toes.

Spark explosion: Shoes with sewed or wood pegged soles, copper nailed heels.

Thus far in this series the extent of the market for women's work shoes has been analyzed; the views of the shoe trade and of working women regarding the need for women's work shoes and the type of shoes recommended for this classification have been reported.

In subsequent articles, the agricultural employment field will be considered, the footwear which should be placed in the work shoe classification of women's footwear will be thoroughly analyzed, and concrete and practical specifications and designs will be presented and recommended. The recommendations are being prepared with the aid of shoe manufacturing authorities, shoe designers and stylists, foot health authorities, etc. They will constitute a practical guide for the industry.

A. L. GEBHARDT CO. MILWAUKEE WISCONSIN

SPECIALISTS IN SPLITS
CHROME TANNED VELVET LININGS—NON SLIPS
FINISHED LININGS—GUSSET SOLE AND GLOVE

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SHOE FACTORY

A MONTHLY DEPARTMENT OF HIDE *and* LEATHER *and* SHOES

Manufacturers and Distributors Are Ready to Fill Women's Work Shoe Needs

By Alfred Henderson

The accompanying reports show that many of the trade's leaders are ready for action to establish a classification of women's footwear which has always been needed; never developed to any appreciable extent; and which now represents a challenge to the industry to make a vital contribution to the war effort. This is the third of a series of articles reporting the results of the most extensive study ever made of the potential market for women's work shoes and its requirements.

HIDE AND LEATHER AND SHOES' study of work shoes for women has revealed conclusively the deplorable fact that the great army of women workers has been the most improperly shod group of women for many years and *continues to be the most improperly shod* despite the increased attention now being given to the clothes worn by employed women during their working hours.

This extensive study of the potential field for women's work shoes made by HIDE AND LEATHER AND SHOES has taken about a year and has been directed at the essential factors affecting the subject. It has already been shown that there is an extensive and profitable market in this field waiting to be cultivated (H&L&S, June 13). The cultivation must start with the shoe industry, and the magazine's correspondents interviewed hundreds of women's shoe manufacturers, wholesalers, retailers, and designers to get at first hand their answers to pertinent questions about the long neglected field of women's work shoes.

Women workers in many diversifield occupations were also asked numerous questions about the kind of shoes they wear on the job, the kind they want, and what they would pay for specially designed and classified "work shoes." The revealing answers of these women workers will be discussed in a subsequent article and still other articles in this series will report the views of stylists and designers, illustrated with practical designs; review construction details and specify typical shoes that can be approved for various kinds of work wear; report the opinions of foot health authorities, safety and personnel directors, employers, etc.; and discuss the opinions of Government agencies, women's consumer groups, organizations of business and professional women, etc.

Yet it is from within the shoe industry that direct action must be started to establish a classification of women's footwear which has always been needed; never developed to any appreciable extent; and which now represents a challenge to the industry to make a vital contribution to the war effort by providing good shoes for women workers and at the same time establish a definite type of shoe that will carry over into the post-war period as a profitable staple.

Many leading women's shoes manufacturers and distributors are ready and willing to do something to remedy the women's work shoe situation. The opinions of some of these were included in the July 4 issue. Others, representing diverse branches of the women's shoe trade throughout the country, are summarized in the following:

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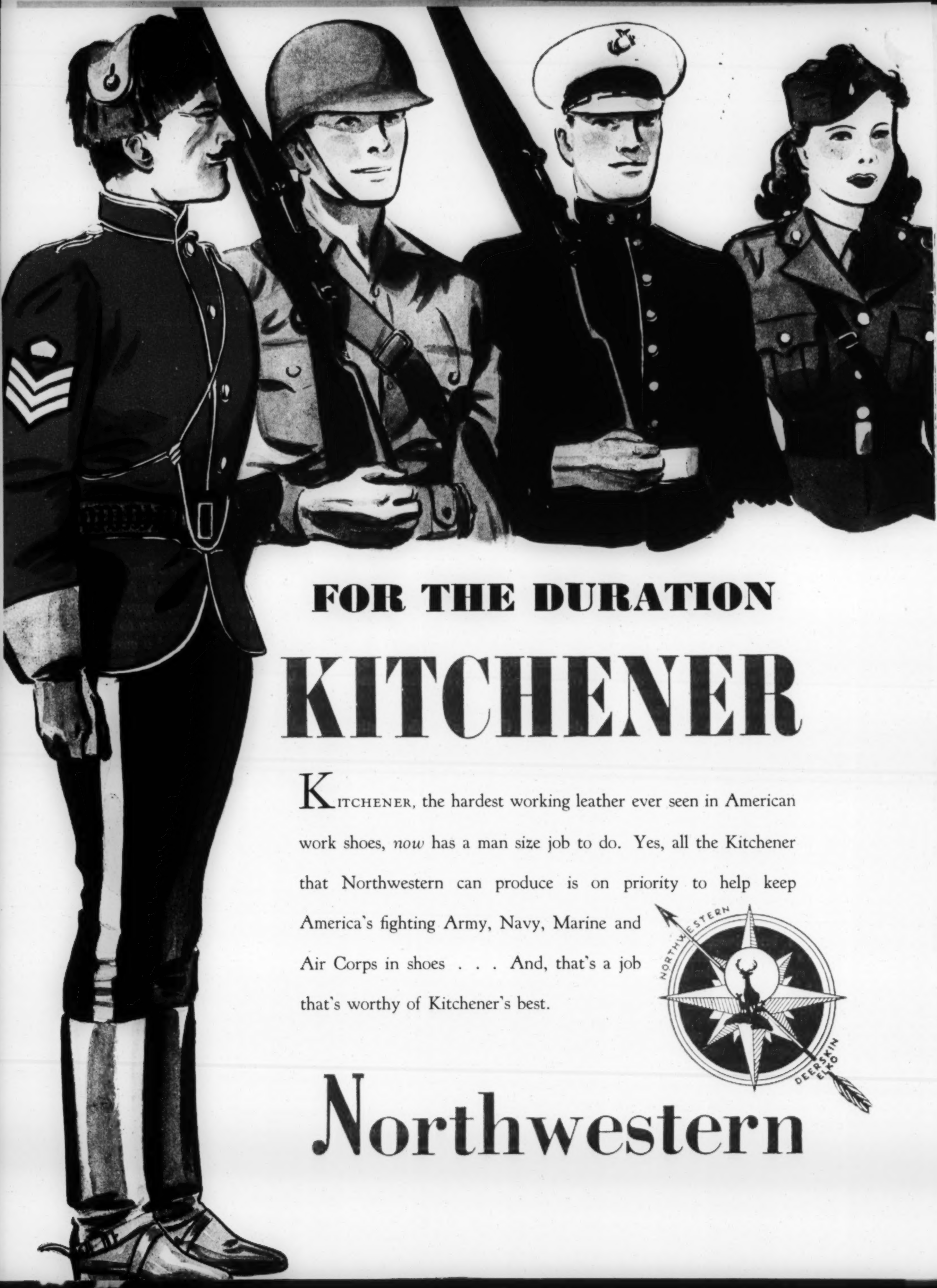
"Interested," Says Buckingham & Hecht

Buckingham & Hecht wholesales nurses' shoes, walking shoes, sport shoes, and similar women's shoes suitable for work wear. It would be interesting to see what developments might be made with regard to "work shoes for women," so classified.

F. W. Gerlach, owner of Gerlach's, manufacturer and retailer of quality shoes, reports that his firm makes a special walking shoe and work shoe, built on natural lines. "But," he adds, with emphasis, "women want style. Style must be evident in all shoes made and sold to women, for whatever purposes the shoes may be intended."

This firm makes nurses' shoes as well as other shoes and with good



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Northwestern

Serves You Best by Serving Them

KITCHENER, you know, is a veteran of the last war. Many of the qualities that have made it such a favorite with American workmen since, its rugged toughness, its pliability, even after extremes of wetness, heat and cold, are due to the fact that Kitchener was developed for the American Army during the last war. Because it did the job so well, it is now reserved exclusively for our fighting forces. The service it is doing now will help make Kitchener a better leather for the great peacetime army it's going to be your job to shoe. *Meanwhile, there are available other Northwestern Leathers which you can specify with assurance, and secure for your "duration shoes."*

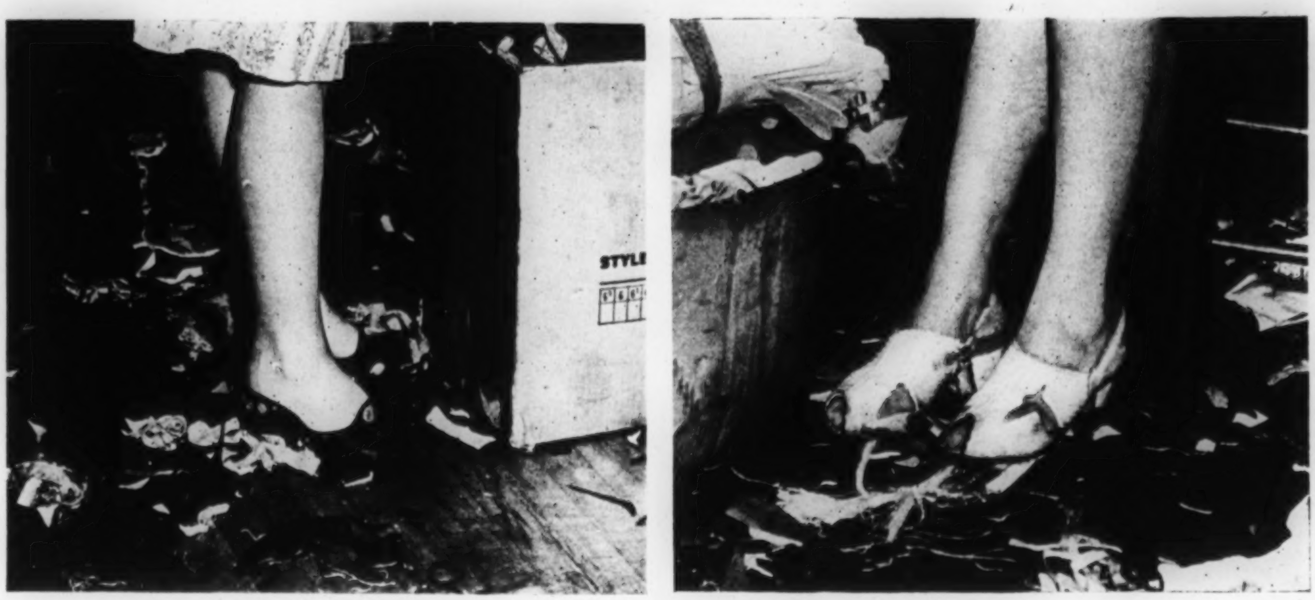
NORTHWESTERN LEATHERS

Elko
Sootan
Kitchener
Russide
Chrome Custom
Deerskin

Leather Company Trust

BOSTON, MASSACHUSETTS

Specify Northwestern Leathers with Assurance of Service



NO SUPPORT FOR THESE FEET

The girl at the left stands on her feet all day, working in house slippers which provide no support for her ankles and arches, while the girl at the right wears a pair of outworn open-toe dress shoes which she has cut away in places for greater comfort. Such shoes are familiar sights in hundreds of factories . . .

success, it reports, to fit the needs of working women who must be on their feet a great deal. "In fact," Mr. Gerlach states, "all the shoes we make are built on basic principles assuring utmost comfort and equal distribution of weight on the feet."

Mr. Gerlach is doubtful that any amount of essential basic information or consumer cooperation would result in a demand for a work shoe for women, unless it had style and was equally suitable for a walking shoe, sport shoe, or casual shoe. Otherwise, he says, "Brother, you have a job on hand. We have made it a life work, for almost 50 years, and we know that women want style above all else. I don't believe you and I can change them, but we are willing to cooperate."

Boyd Welsh, Inc., St. Louis, would not be interested in the development or promotion of the heavy work shoe. Officials, remembering the unsuccessful reception of these shoes during the last war, feel that even in the case of the present severe emergency, demands for such a shoe are and will be too small for any novelty shoe company to take over. Whatever the demand may be, it believes, it will be handled by volume producers who are already mechanically equipped to manufacture heavy welt shoes. Gilbert Jonas, styleman for the company, places the light weight work shoe, casuals, loafers, etc., first in today's shoe styling and forecasts a steady increase in the demands for these shoes.

A. H. Stein Co., Haverhill, says: "We are making some growing girl's shoes and also a quantity of sensible, low heel styles. Would consider an order of women's work shoes."

Lincoln Shoe Co., also of Haverhill, comments: "We make women's novelty shoes. But if there was a big demand for women's work shoes, or if the Government wanted special work shoes for defense workers, we'd make them."

LaGrange Shoe Co. Says Women Need Comfort

A. G. Nelson, secretary of the LaGrange Shoe Co., Red Wing, Minn., agrees that there should be a work shoe classification for women, although he doesn't know just what type of shoe should be included in this classification. The firm makes what might be termed a woman's work shoe now. It is made over a regular last, gives a great deal of comfort in wear. In turn, women use some of the regular sport shoes as work shoes. It does have a greater demand now than before for shoes for women to work in. This is true particularly in moccasin toe types. A good many women are wearing saddle sport oxfords for work also. The company also makes nurses' shoes which have a flat insole that is comfortable for work, in that it is stitched down. The arch feature has been added, which is desirable for people who are on their feet a great deal. This is not a corrective shoe, however. The firm also has a sole that is made principally of felt with rubber binder. That shoe does not have a tendency to draw on the foot, is flexible, and good wearing. These shoes are not as rigid as welt constructed soles. One is unlined perforated and the other is lined, with an imitation tip toe. The plain shoe is used as standard. The perforated shoe is not standard, but used by waitreses, etc.

Richard A. Hull, president of the LaGrange company, doesn't think that such a term as "work shoes" should ever be applied to women's footwear. He says the very name defeats the purpose and that while working women need practical shoes to work in, if they are called "work shoes" they will not buy them. Suggests "service shoes" as more delicate and salable. Says "work shoes" will spoil any sale. He does not believe that you can be obvious at any time in relation to classification in this field. You can say a shoe is smart and suitable for heavy wear. That will get by. Women like a little stitching, something to dress a shoe up. This is in direct antithesis to a man who demands work shoes.

Mr. Hull feels the field is covered by the manufacturers but a great deal can be done to teach women. Thinks an educational campaign should be launched to teach women

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Editor's Note—The photographs accompanying this article were taken by Hide and Leather and Shoes in a midwestern factory making leather equipment for the Army and were released by the War Department for publication . . .

the value of proper shoes for work, to show them what high heels, poor supports, etc., do to their bodies. He feels backaches, indigestion, and all sorts of troubles arise from the fact women are not educated along this line. They demand style regardless of construction.

J. R. Sweasy, president of the Red Wing (Minn.) Shoe Co., does not see the need for a special classification for women's work shoes. He says: "We have the nurses' shoe which is suitable for secretaries, etc.; the everyday street shoe which is practical for business women, etc. The company manufactures a shoe called "the farmer's wife oxford." This is very crude but has always been a big seller. Made in one last, of black kid, with a nailed sole.

He finds the demand for "women's work shoes is in proportion to the general demand but no greater than any other type of shoe."

"Women's moccasins," according to J. A. Cordreau, President of the Saco-Moc Shoe Corp., Portland, Me., "have found favor among women working in industries. Of the three types manufactured by this company the loafer and oxford styles seem to be the most popular." Mr. Cordreau said that 90 per cent of the girls in his own factory wear one of these two styles for work shoes and that he knew that this soft, pliable footwear has become popular with girls in many other industries within the Portland area.

"No Practical Purpose"

"I can see no practical purpose to be served by instituting a work shoe classification for women," declared Herbert S. Holmes, president of Holmes, Stickney & Walker, Inc., Portland, Me. Mr. Holmes went on to explain that women were "too feminine" to take readily to a set style in a work shoe or any other type of shoe and that further it was his belief that the numerous different numbers in women's shoes were more than adequate to take care of the present demand of the women who have entered industry because of the current national emergency. Enlarging further, Mr. Holmes pointed to the company's so-called comfort line with heels ranging from 8/8ths to 15/8ths and especially pointed out a model of full grained elk skin as a possible solution for women's foot comfort when their jobs called for their being on their feet long hours at a time. In addition to these particular models this firm also manufactures two types of nurse's shoes, one with rubber and one with leather soles.

Says Proper Work Shoes Would Prevent Ruined Feet

A Milwaukee firm which specializes in the correction of foot troubles reports:

"Our business has increased considerably due to employment of women in defense jobs, and other lines of work where men were replaced.

"Many of these women workers come to us after too much damage has been done. They wear their cast off dress shoes for work, either shoes with heels that are too high, or with no ample arch support. No thought is given to foot care to offset the wearing of these shoes unsuited to work.

"In the first place these cast off dress shoes should not be worn at all. They ruin the feet of the women workers if neglected. Women come to us, and have to purchase arch supports or specially constructed shoes, and undergo foot treatment.

"All of this could be prevented if these women workers were educated to buy, and could buy shoes suited to the many new forms of work they are now engaged in.

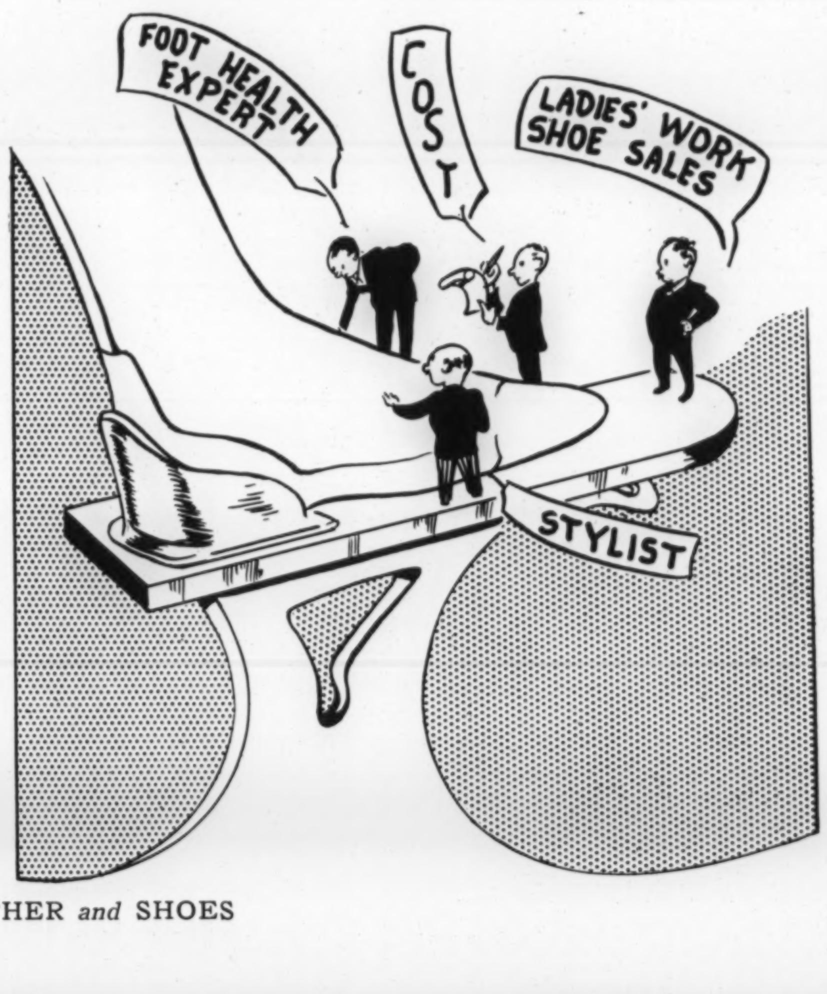
"This should open up new fields of sales outlets for women's work shoes, properly constructed. And the women workers should be properly educated on the wearing of well fitting, well constructed work shoes. This is the job of the shoe manufacturer."

Gray Bros. Shoes, Inc., Syracuse, N. Y., does not make work shoes and has not noticed any great demand for shoes for work wear, but it does notice a trend toward conservative and military styles.

Classification Is "Absolutely Needed"

A Philadelphia manufacturer of high style shoes for women commented that "an ordinary street or sport shoe can meet the requirements in the type of work in which most women will be engaged in the very near future. Shoes with low heels of a slightly heavier construction in calf or finished elk would amply fill the needs of working women. We don't feel it is necessary to go into heavy, unlined shoes that men wear in certain phases of industry. Any increased demand for work shoes for women would escape us since we manufacture dress shoes that are extremely stylish. We do make some street shoes but we concentrate especially on the style angle. Right at the moment we wouldn't be interested in making work shoes or studying their possibility of becoming an important market in the future. Our present line of production has every indication of continuing active. However, we will keep our minds open to any changes that take place in the shoe industry."

Although this article has been con-



fined to reporting the views of factory executives, it is interesting to observe here that the views of at least two of International's field men coincided closely with those of the main office.

Interviewed in Boise, Idaho, M. J. Arduser and J. J. McKell of the International organization declared that "absolutely there should be a work shoe classification for women." This classification, they asserted, should include oxford, arch support, and corrective type. They said they have experienced an increased demand during the past two years for shoes with lower heels which was probably created by increased purchases for work wear. Very few nurses' shoes are sold to women workers generally, they observed, although such shoes are occasionally purchased by waitresses.

Questioned as to whether they were already prepared to provide suitable work shoes for women, Mr. Arduser said that some lines were built especially on basic principles suitable for work wear and made of soft, flexible materials. These shoes are made with low heels to provide greater walking and standing comfort.

Pain and Lost Time Caused by Wrong Shoes

Vivid corroboration of the pressing need for more suitable footwear than is now being worn by women in industry and trade is presented by "Hide and Leather and Shoes" interview with a Wisconsin manufacturer of corrective shoes, who said:

"Women now engaged in work formerly done by men, in defense plants, shops, etc., are now forced to remain on their feet for long hours, much longer than accustomed to. Even though the work itself is not heavy, the constant standing in one spot results in great strain on the feet of these workers. The feet, not being conditioned for this strain, break down; resulting pains in the limbs of the women workers are often ignored, or negnected at first. The final result is that the workers are forced to stop work and seek the cause.

"They then come to us. After examination of the feet we often find either completely fallen arches, or arches in the process of breaking down. Often the condition is so far advanced that the worker loses considerable time before going back on the job. We are overly rushed with work, and with a constant waiting list.

"If they had properly constructed work shoes in the first place, they would not have this loss of time and money spent either on arch supports, or specially constructed arch supports, or comfort shoes."

The average housewife is becoming more shoe conscious, these shoemen observed, noting that more play and sport type shoes are being worn by housewives at work and adding that "the comfort style house slipper has now become almost obsolete."

Gabow Says Special Types Are Needed

Morris Gabow, general manager of the Buddy Shoe Mfg. Co., Philadelphia, declared:

"It is our belief that special types of work shoes should be at the disposal of women in industry, in stores or restaurants and in the home. Just what kind of shoes would be suitable for these purposes is difficult to say because the different fields of work require differently constructed shoes. In our own factory, there has been an increased demand for felt house slippers. We feel these shoes are excellent for housewives because they are comfortable, they stretch and the natural qualities of felt keep the feet warm in the winter and cool in the summer.

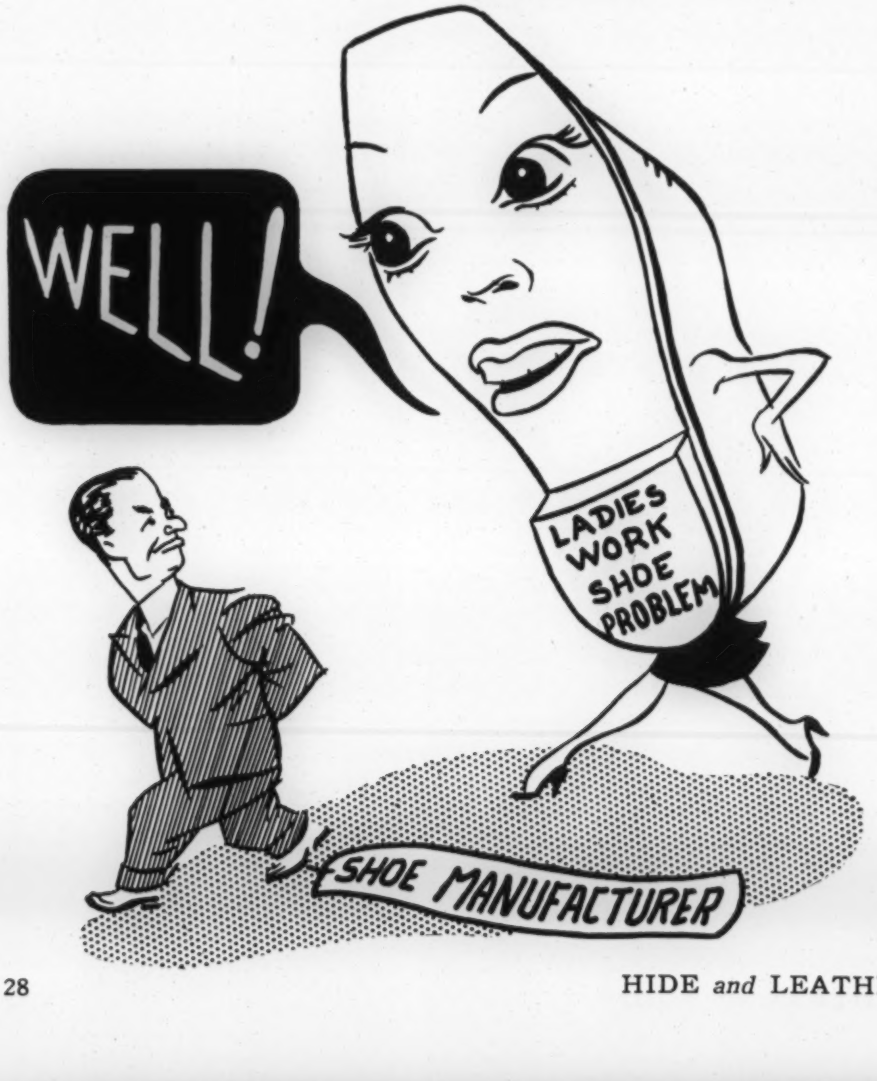
"Up to now, we have never attempted to make nurses' shoes or any type of footwear suitable for working purposes. However, at the moment, samples are being made of women's oxfords for work wear. This is being done in an effort to establish all-year-round production at our plant. Whether or not this will be successful is hard to prophesy. If we find a growing market for these shoes we may be interested in continuing along these lines."

"Can Be Attractive As Well as Practical"

William Gorelick, general supervisor of the Reuben Gordon Shoe Co., Philadelphia manufacturer of high grade novelty footwear for women, said his organization has naturally experienced no special demand for work shoes and added:

"Our line is high grade novelty footwear for women and we have no contact with any demand there may be for work shoes. However, we believe that a comfortable shoe with plenty of style can certainly meet the demands of working women today. There is actually no need to go beyond this and sacrifice style and beauty in making work shoes. There is every reason to believe that this type of shoe can be attractive as well as practical.

"Recently we have noticed an increased demand for low heeled shoes which can be adapted for work wear. This is the only indication of the trend towards practicality that we can



experience in our line. We do not manufacture nurses' shoes or any shoes having basic principles or special materials selected for their adaptations to work shoe wear, and have never experimented in that field. Furthermore, we will continue along our present lines of production even if the demand for work shoes grows. We feel that the large number of factories well equipped to handle this type of shoe will be capable of taking care of the increased demand. Stylish novelty footwear has a definite place in the shoe industry and will continue to have one as far as we can see."

"In Sympathy And Interested"

The Dodson-Fisher Co., Minneapolis, Minn., specializes in making work shoes for women and an executive of the company told HIDE AND LEATHER AND SHOES that there should be a special classification for "work shoes" for use by women working in hospitals, factories, restaurants, on the farm and in the home.

He thinks that "work shoes" should be the best shoes because they are worn more hours in the day than other shoes and receive more strenuous wear. This firm's "work shoes" have a semi-rigid shank; one that will bend with the arch of the foot. It does not believe in real rigidity in a woman's "work shoe." These shoes are made with either light weight or heavy leather, suited to the wishes of the trade, but the company strongly advocates light weight leather.

"There was a time when a woman wore her dress shoes until they began to show wear and then they would wear them around the house for 'work shoes,'" the firm said. "Women are now beginning to realize that this is all wrong. They are becoming 'work shoe' conscious, consequently there has been an increased demand for that type of shoe. We are very much in sympathy on the matter of 'work shoes' and will be interested in hearing the result of this survey."

They Make Them for Men, Why Not for Women?

Dexter M. Keezer, deputy administrator of the Office of Price Administration, submits the following comment which he believes will be of interest in connection with the discussion of women's work shoes. Mr. Keezer says:

"It was received by the Bureau of Home Economics of the Department of Agriculture from a rural district and bears a viewpoint pertinent to your study."

"To whom it may concern," the Department of Agriculture's correspondent addresses herself:

"Farm workers do most of their work on their feet.

"Really if food is going to win this war the farmers' wives and daughters will have to get in the collar and really work.

"They can't do a good job stuck up on Cuban heels. Neither can workers in defense plants. What I am interested in is proper shoes for farm workers. Low, wide, flat heels on narrow shoes that fit. THEY MAKE THEM FOR MEN, WHY NOT FOR WOMEN AND GIRLS?

"We can buy some that fit, but they are not sturdy enough for rough wear ...oh! the price.

"Most farmers are shy on cash, most of the time. They simply can't afford $10.00 to $15.00 per pair for shoes.

"It is all right for office workers to wear high heels, but have you ever seen a woman dressed in overalls with high heels...the same goes for slacks or any kind of pants.

"We ride horse back a lot. It costs us $15.00 a pair for riding boots to fit our narrow feet, and they are of too fine a leather to stand up under general farm wear, and are also too hot to wear in the summertime. We could not get any low shoes without having them made to order. Now is the time to help out the farm women's feet. Believe me, they will thank anyone who does it, from the bottom of their hearts."

Cincinnati Mfrs. Are "On the Alert"

Women's shoe manufacturers in the Cincinnati area are on "an alert" for any protracted trends in the needs or demands for "jobettes." As a matter of personal observation, most of the manufacturers who employ women in their own shoe factories believe that "shoes have a lot to do with morale." While expressing "willingness to cooperate in any practical way," most of the manufacturers interviewed believed that "amplification of the present lines, if demand persisted" would be adequate to supply requirements. There was a definite "hesitancy" expressed by most of the women's shoe makers answering queries to "elaborate on types or styles" unless "such developments would be a definite contribution to the war effort."

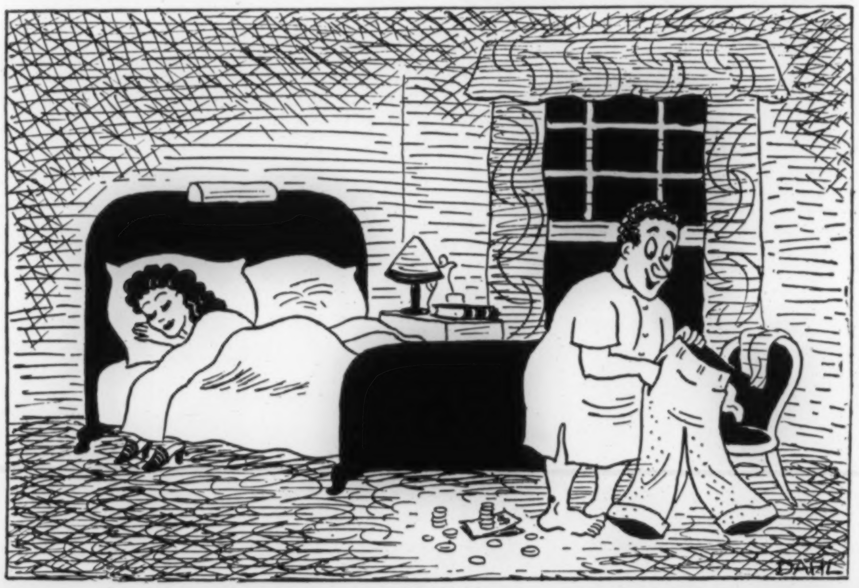
"Comfort Types" Adaptable for Workers

Julian Marks, of the L. V. Marks Shoe Co., admitted that his firm had been "playing around" with the idea of a work shoe classification for women. The company makes a "comfort type" shoe that is adaptable for many women workers.

Mr. Marks reported that his firm has not experienced "any great increased demand" for innovations in women's work shoes, but on the other hand expressed his observations of "a quiet going back to the staple lines." Attitude of the Marks company on designing a new line of shoes for women at work, as result of HIDE AND LEATHER AND SHOES' survey, Mr. Marks said, "depends entirely on local conditions."

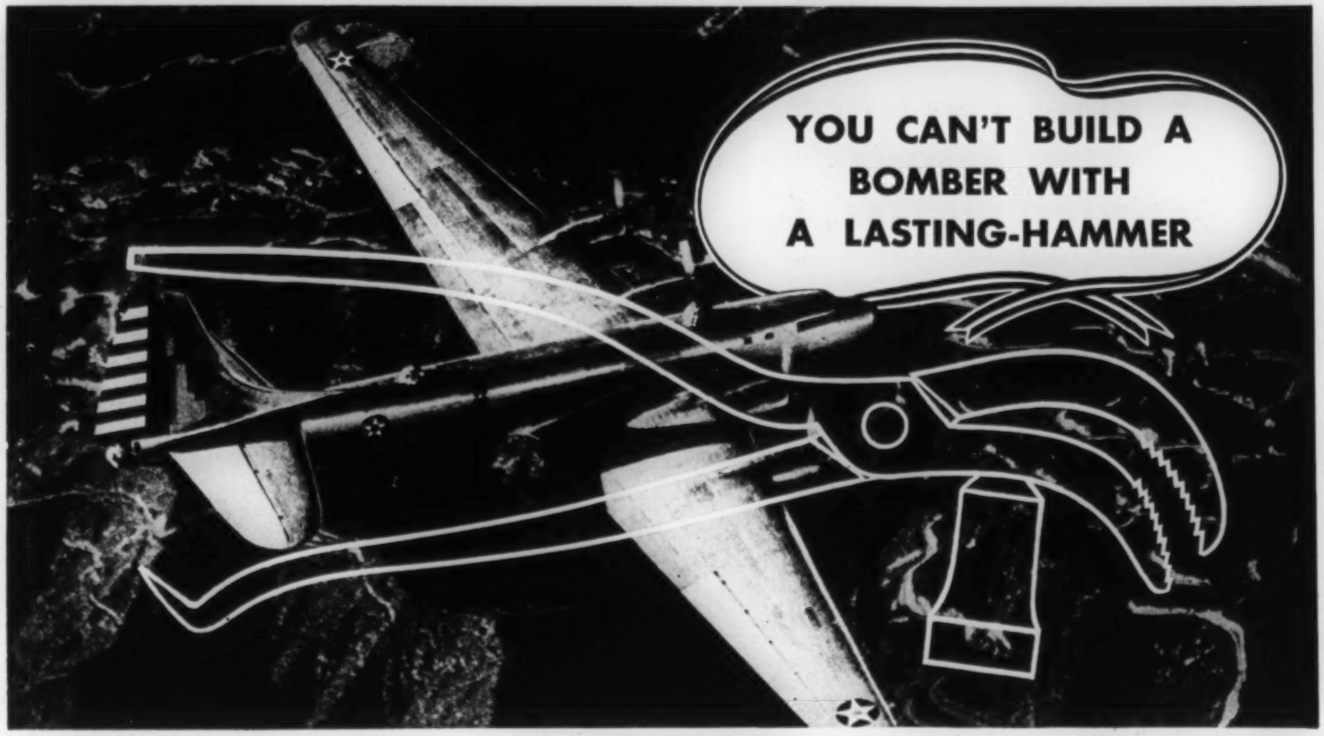
Arthur P. Sullivan of the P. Sullivan Shoe Co. said their company makes a nurses' shoe which he said "is adaptable for workers who must do considerable walking or must be on their feet for long periods."

Mr. Sullivan reported "no increased demand" for nurses' shoes recently, but expressed belief that over a long range there had been



HERS

Cartoonist Dahl, of the "Boston Herald," finds a familiar comedy theme reversed and gave "Hide and Leather and Shoes" permission to reproduce his cartoon on a new aspect of "women who work" . . .


YOU CAN'T BUILD A BOMBER WITH A LASTING-HAMMER

but—you can cut down unnecessary lasting-room waste by following these four simple rules:

Check up on your box toe sizes. Be sure that you are not buying and *wasting* valuable box toe material in sizes that are needlessly large. Properly sized box toes cost you *less* and actually improve your shoemaking.

Order as needed. Do not overstock. Waste occurs when large surplus stocks develop on novelty sizes that have *no* resale market.

Use *white* soft toes in *white perforated* shoes. Otherwise use a Beckwith grey material (stainless) for all softies.

—and most important—Use a Beckwith box toe for maximum performance. Beckwith toes eliminate lost time and wasteful replacements and in the long run they cost *less*.

All Beckwith salesmen and agents will be pleased to co-operate in studying your conditions and recommending, wherever possible, economies that will save you money and preserve valuable resources essential to the shoe industry.

BECKWITH BOX TOES

BECKWITH MANUFACTURING CO., DOVER, N. H.

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SHERBROOKE QUEBEC CANADA
AGENTS: GEO. A. SPRINGMEIER CO., CINCINNATI, OHIO

MILWAUKEE, WISCONSIN
WRIGHT GUHMAN CO. ST. LOUIS, MO.

WHILE WORKING WEAR WORK SHOES

a more general "adaptability of the nurses' shoe to women employed in stores, restaurants and certain types of industry."

"If a survey showed a definite and sustained demand for specially designed shoes for women who are working in defense, munition, or arms plants," Mr. Sullivan added, "of course, we would be ready to do anything practicable to aid the war effort."

Reports Increased Demand from Workers

S. J. Eisman, president of the Charles Meis Shoe Mfg. Co., believes there should be a work shoe classification and he expressed much interest in the survey by HIDE AND LEATHER AND SHOES.

"Meis now makes special work shoes for working women," Mr. Eisman declared and "there certainly has been an increased demand for them, as far as our experience goes."

While admitting that "horse sense in design" must predicate the results of the survey, he said that his plant would "give serious thought to the information obtained in the survey."

While the U. S. Shoe Co. has "not gone in for the work shoe idea," A. S. Salinger of the plant's executive office said "we would be interested in the results of a proper survey." Mr. Salinger said "we've not experienced any great increased demand for women's work shoes in recent months" but he intimated that with more women going to work, and an even greater number of women workers anticipated during the next six months, "there may be something to this survey idea."

Frank O'Brien Calls Survey a "Happy Thought"

At the Krippendorf-Dittman Co., Frank X. O'Brien, vice president and general manager, declared that "there's no question about a much increased demand for a more military type shoe that is practical and serviceable."

Mr. O'Brien reported that "the swing to low heels is the vogue" and that his plant had tried to adjust itself to demands. Krippendorf-Dittman is making women's shoes that are adaptable for workers in the "war time" jobs, he said.

Relative to the HIDE AND LEATHER AND SHOES' survey, Mr. O'Brien said "everything must be guided by what's possible." He believes that supplies of calfskin and sole leather will be "an item" for translating "desires expressed in a survey to production possible by availability of supplies."

Mr. O'Brien concluded: "The survey is a happy thought and it might turn up something."

Air-Kushin "Appreciates Survey"

A defense shoe is being produced by the Air-Kushin Shoes, Inc., A. J. Sachs, sales manager reports. "We've anticipated the prospective future growing demands for a low heel, walking type of shoe that is practical for women who are forced to be on their feet for long periods."

He reported that Air-Kushin is now making a women's shoe that "can be classified as a work shoe" and appreciated the reactions derived from the survey.

"Mfrs. Should Make Them; Retailers Will Sell Them"

Cincinnati manufacturers were unanimous that "merchandising of work shoes" will not be so difficult if the "military air and comfort attitudes" prevail. They also expressed belief that the recommendations of personnel directors, health authorities, and podiatrists coupled with "a war time fashioning motif and patriotic verve" would have influence in "ringing the bell."

"The American woman whether she's in the shop or the salon wants to be up-to-date" one spokesman said. "Translated, this means if women's work shoes are the vogue, manufacturers should make them if they can get materials and retailers will sell them if they get the merchandise."

A Milwaukee shoe wholesaler says: "We recently have found increasing demand opening up for hi-cut shoes for women. One reason for this is the fact that many women are replacing men in services requiring the driving of automobiles or trucks used for commercial purposes. An outstanding example of this is the recent employment of women drivers of cabs. These women work the day shifts in Milwaukee, taking the places of men who are in the Army and other military services, or engaged in defense work.

"Last winter these women cab drivers turned to hi-cuts for foot protection while on the job. They have

Surpass Kid
-AND DON'T FORGET ME; I'M THE SURPASS TANNED KANGAROO

SURPASS PRODUCTION IS ALL OUT FOR VICTORY

IN GARMENT, GLOVE OR SHOE LEATHER

May we take this patriotic occasion to point out how well Surpass fits into the present war time situation. Surpass Garment Goat makes good-looking, long-wearing, sturdy flying suits and jackets for our Army and Navy Air Forces. And Surpass Glove leather also plays an important part in meeting American military requirements.

Full consideration is being given to civilian needs with Surpass production at the maximum permitted by Government regulations.

Surpass Black Glazed, Colored Outsides, Suedes, Capre, (in blacks and colors) Kid Linings and Surpass tanned Kangaroo comprise the diversified shoe leather service.

SURPASS LEATHER COMPANY
9th & WESTMORELAND STREETS
PHILADELPHIA, PENNA.

"PUNCHING OUT"

The shoes worn by these women workers as they "punch out" and leave for the street (which offers far fewer foot hazards than those prevalent in most factories) furnish a striking contrast to the shoes they wear at work. These girls say they are interested in wearing better shoes on the job, but ask "where can we find a collection of good work shoes?" . . .

to jump in and out of their cabs hundreds of times each day, and in winter weather, with snow and wet underfoot conditions, these women want foot protection.

"Further, women have replaced men as filling station attendants in some instances here. It might profit the women's shoe manufacturers to construct shoes for these workers similar to the new fire, or spark-proof safety shoes."

Says Women Will Demand Work Shoes

Mrs. Herder, of Lewis M. Herder, Philadelphia, wholesaler of women's house slippers and comfort shoes told HIDE AND LEATHER AND SHOES that although at the present time women are not educated to wearing special work shoes, they will demand this type more and more in time. "It is apparent that dainty shoes will have to be discarded for shoes of sturdier construction," Mrs. Herder said. "Our recommendation would be a very low type oxford which gives plenty of support around the ankles. A very sensible feature of this type is the fact that it has practically no heel.

"Since we handle only house slippers and comfortable shoes for older women we have had no occasion to notice any increased demand for work shoes. We sell shoes that are lightly constructed for indoor wear only. At the time we haven't the facilities for handling stock that is not in our line. Of course if an emergency arises and it becomes necessary for us to expand or change we will rise to the occasion. It is difficult to make predictions since only time can tell what tomorrow brings."

At the Ideal Shoe Co., Philadelphia wholesaler of women's sport, novelty, and orthopedic shoes, Mr. Kaplan, manager, said:

"In our opinion, there is no doubt

Quit Your WORRYING

If you are faced with production problems arising from the necessity of using new materials, call upon Boston Machine Works' long experience in meeting and solving thousands of such problems.

What may be a new problem to you may be an old one to us. We can help you.

Get into the habit of calling in a Boston Machine Works representative.

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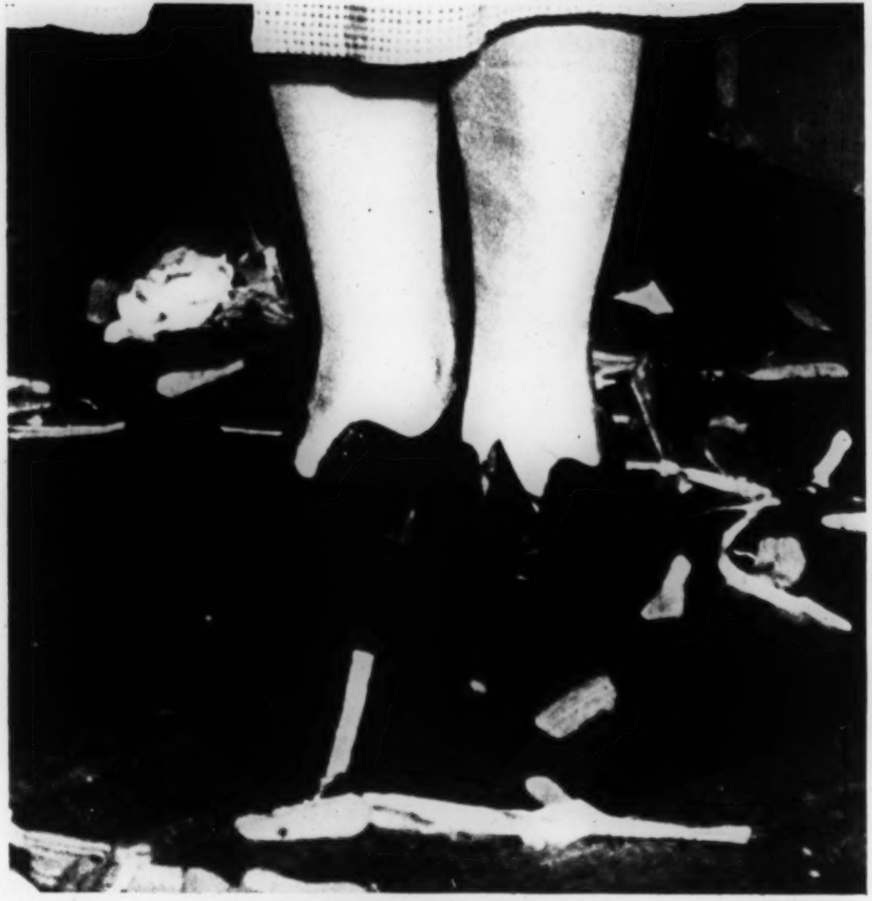


NO STYLE AND NO PROTECTION

It is often said that women demand "style" in work shoes in preference to comfort and protection, but many women workers now wear footwear which has neither style nor protection. The shoes shown above are comfortable, but they are run over and in this condition the worker adds to their hazards by wearing them unlaced. A quick turn, or a careless step upon some loose object on the floor may cause a serious fall and injury . . .

that there should be a 'work shoe' classification for women. The nurses' type of shoe in use nowadays is a good example of the kind of shoe that fits into that category. In spite of the urgent need for good comfortable shoes, we have found that women are reluctant in sacrificing style for comfort.

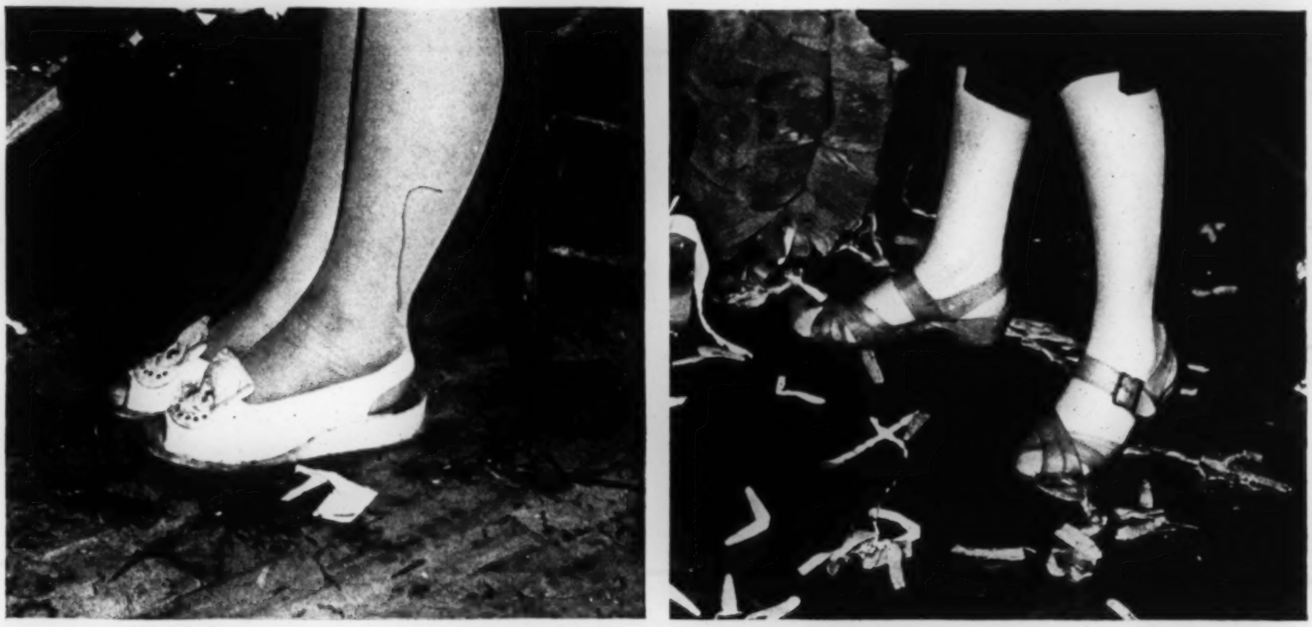
"The line of merchandise we carry includes nurses' shoes. These are of soft leather, low heeled, wider than regular shoes and built exclusively for comfort. They are bought by nurses, elderly women, salesgirls, and women who stand or walk a great deal. If in the manufacture of work shoes style is given an important consideration they may be popularly accepted."

"Welcome Innovation"

"Work shoes for women would be a welcome innovation," said H. Levine, of the Jaffa Co., Los Angeles wholesaler. "The low heel, arch type is suitable." Mr. Levine revealed that waitresses are now going in for play, or "slack" type shoes, which he believes is evidence of a consumer desire for comfortable, serviceable work shoes.

"A woman's work shoe should have a sensible heel, and should be an oxford," according to S. Ganulin, of the Harry Shapiro Shoe Co., another Los Angeles wholsaler.

Mr. Richardson of the Bliss & Richardson Shoe Co., Portland, Me.,



NO PROTECTION AGAINST FACTORY HAZARDS

The girls in the above pictures are working on supplies for the Army. Their feet are not endangered by the possibility of being injured by heavy falling objects, BUT they may be painfully hurt by light falling objects, nails, splinters and similar "minor" hazards of light factory work. Such "minor" hazards frequently cause injuries that lead to lost time and suffering. Against such hazards, these workers have provided practically no foot protection. Note the open toes and heels of the shoes at the right, and the open construction of those at the left . . .

wholesaler, believes that there should be a work shoe classification for women now that so many women are replacing men in certain jobs in industry.

The Bliss & Richardson company handle a less expensive line of women's shoes and many of its numbers are suitable for work wear but as yet it has had no noticeable gain in business along this line other than that to be expected by increases in public purchasing power. In addition it sells a line of nurses' shoes, but the volume on this item is very light.

Berland Stores "Welcomes Study"

I. Weiss, advertising manager for Berland Shoe Stores, Inc., St. Louis, states that women cannot be educated beyond a certain point as far as foot health and foot comfort is concerned.

"There is a decided increase," he noted, "in the demand for sport shoes, a type of shoe worn by almost every working woman today. Two or three, maybe four pair of these casuals are included in a year's budget for the average girl whereas one pair of a typical 'work shoe' type might give a full year's service.

"Considering material conservation this sounds like a good idea for a country so involved in war as ours is. Any surveys, studies, or reports on possible developments of the subject would be welcomed by the Berland company."

Classification Is "Unquestionably Needed"

Harry Goldberg, secretary of the Bett Shoe Co., Inc., Philadelphia wholesaler of women's novelty shoes, says:

"In these times, unquestionably, there should be a 'work shoe' classification for women. Very good for this purpose is the arch type with 14/8 square heel with rubber lift in black or white kid or any soft leather. Lately we have noticed an increasing number of calls for certain of our shoes which might be classified as 'work shoes.' These come mainly in 'ties' although we do handle some 'step-ins.'"

Editor's Note—The next article in this series (which started in the June 13 issue) will report the answers of women workers in many diversified occupations to detailed questions about their present work footwear, what they want to wear to work, what they would pay for proper work shoes, etc. It will be published in the Sept. 5 issue.

But What Do Women Think?

Previous articles in this series, published in the June 13 and July 4 issues, have revealed that the potential market for women's work shoes is large, lucrative, and almost wholly uncultivated; that attention to the needs of this market NOW would be a valuable contribution to the war effort and would provide a sound foundation for post-war sales; that shoe manufacturers are interested in the possibilities of making women's work shoes; and that they are prepared to cooperate in providing working women with suitable work footwear, properly identified as such.

Additional personal interviews with shoe manufacturers, wholesalers, and retailers are reported in this issue.

But what do the women think? What kind of shoes are they now wearing to work; are they satisfied with them; what do they now pay for the shoes they work in; would they buy specially designed work shoes, what would they pay for them, and what do they want?

To find the answers to these questions, "Hide and Leather and Shoes" asked women in many diversified occupations for their views. Their answers are revealing and convincing. They will be reported in the fourth article in this series, to be published in the Sept. 5 issue.

"Hide and Leather and Shoes" has made an extensive study of work shoes for women, taking about a year and covering every important phase of the subject. The results of the study are being reported in a series of copyrighted articles that has already attracted wide attention.

New Book for Shippers

A new 48 page book modestly entitled "Shippers Handy Helper" has been prepared by the Diagraph-Bradley Stencil Machine Corp., of St. Louis.*

The book contains a wealth of invaluable information for daily reference by shippers in all fields, and includes U. S. Department of Commerce regulations for marking export shipments, together with suggestions for packing and marking freight and export shipments, metric conversion tables, and a special article on recommendations for export marking, written by C. L. Lippert, export manager of the company.

U. S. Army specifications for marking shipments are detailed in the book, and helpful instructions for the care of shipping room equipment to prolong its life and efficiency are offered.

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*Obtainable without charge from the Book Department of HIDE AND LEATHER AND SHOES or the Diagraph-Bradley Stencil Machine Corp., 3745 Forest Park Blvd., St. Louis.

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Britain's Utility Footwear

By Robert Williamson

The much talked about "utility footwear" of the British shoe industry will now constitute about one-half the industry's production. The new footwear is serviceable and conservative but by no means "standard" to the extent that it is lacking in style variety. Mr. Williamson is closely connected with the British shoe industry and his description of this new footwear is of timely interest. He has written numerous other articles on the British shoe industry which have appeared exclusively in past issues of "Hide and Leather and Shoes."

EVERY kind of available material is now being used by Britain's boot and shoe industry for the utility footwear which from today onward is to form a large proportion, probably one-half, of the boots and shoes produced for civilians in Great Britain.

Men and women in the services have the exclusive call upon the boots and shoes which may be correctly described as standard, for the good reason that standardization demands large supplies of special types of materials. Civilians will necessarily be given for their new utility footwear all the other leathers to be had in wartime. These include most of the familiar varieties with a few more developed by the tanning industry to meet special wartime needs. For the lighter weight in women's shoes there is glace kid in black or blue or shades of brown, as well as suede in various colors. Some improved forms of goat leather are likely to be available in grain effects. For purposes of contrast or decoration there are reptile grain leathers, manufactured of calf or kipskins, the best grades of which are quite indistinguishable from real reptile skins. Calf leathers are in short supply. Only a limited pairage is possible in them. Although side leathers, the next best thing to calf, are not plentiful, they will be used to some extent, especially for men's walking shoes.

New "Blend" Sole

Hides not at present required by the motor or upholstery trades are being diverted to the use of the shoe trade. From these we are getting grain leathers in a range suited to various types of shoes, from light walking to heavy industrial. Heavy grain hide leather is being used for mining, agricultural, and quarrying boots.

The use of crepe rubber soles has been prohibited since the main sources of supply fell into enemy hands, and when the crepe-soled footwear at present in distributors' hands is cleared, there will be no more of it until the plantations are restored to their owners. Hard wearing composition soles, sometimes erroneously supposed to be made of rubber but containing only a little of it, are included in the utility series.

Leather, however, will be the material mainly used for bottoming. The call for great quantities of sole leather for service boot manufacture and the elimination of crepe rubber have thrown a considerable strain on bottom leather suppliers, and trade experts are testing many ideas for making each pound of leather go further than it has ever gone before. One of the most hopeful experiments aims at producing a "blend" sole, with prime leather for the tread or forepart of the sole, cemented to an undersole of secondary grade leather, the joint-splice being riveted by copper rivets at the waist. The undersole forms waist and heel seat. A substantial saving in prime leather although much less than has been rumored, could be achieved by this method, which is receiving the attention of the Director of Civilian Footwear (H. G. Durston) under whose management the utility footwear scheme has been developed.

80 Types in Utility Range

In view of the great variety of materials to be drawn upon, specifications for utility footwear are necessarily somewhat elastic. Samples are based upon types representing the ordinary productions of the various manufacturing districts. Basic samples represent maximum permitted costs. They are not necessarily to be copied in every detail. A basic shoe may be Gibson cut, but manufacturers may vary their productions from Gibson to Oxford, or any other style variations which may result in reductions in cost prices. Producers have considerable latitude under the scheme, and provided that they insure protection for wearers and durability in the footwear, they will be at liberty to introduce their own variations in designs. The costs of any variations, however, must not exceed a trifling percentage to be agreed upon between controller and manufacturer.

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Extreme decorativeness, involving time and labor, is forbidden, but the lighter weights and walking types of utility shoes will not be less attractive than the best types at present on offer in the shops. In designing women's lighter weights, manufacturers are introducing distinctive and attractive features which will appeal to discriminating wearers. The term "plain" applied to these shoes has nothing in common with the term "plain" applied to Jane! It just indicates a simple design. New lasts have been specially cut to make the most of form. They will emphasize line as a distinct point in good shoe designing.

The utility scheme provides for the manufacture of over 80 different kinds of boots and shoes, in five groups, the first three being cheap and medium grades for men, and women, and boys, girls, and infants. The fourth group includes men's and women's heavy industrial and agricultural boots. The fifth group is of men's and women's high grade boots and shoes. In these groups there are approximately 15 kinds for men, 22 for women, 12 for boys, four for girls, 11 for infants, four nursery types and 14 heavies.

15,000 Operatives Have Joined Up

In estimating one year's output of utility footwear, several factors must be considered. From a peacetime output of 105,000,000 pairs of all types of leather footwear for the home market, the industry was concentrated to a civilian home output of 80,500,000 pairs. During April and May of this year licenses to manufacture were cut by 20 per cent for men's ordinary; for women's 11.5 per cent, and 10 per cent for girls' and maids'. Among the types for which output has not been cut are boys' and youths' footwear and heavy boots for mining,

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IN 1941 about 500 shoe manufacturers produced the staggering total of over 182 million pairs of women's shoes. This does not include footwear classified as misses' shoes nor any in the athletic, part leather and part fabric, all fabric, slipper, or beach sandal classifications. The production of footwear in the "women's shoes" classification alone last year represented about four pairs for every woman in the country.

In this single classification there were shoes designed for practically every occasion and purpose of feminine wear with one notable exception—there were no shoes specifically designated for work wear. Therefore, it is indicated that the industry wholly neglected to recognize the vitally important clothing needs of some 13 million women who last year spent a large part of their time working in factories, stores, offices, and other places of employment.

The women's shoe industry manufactured scores of types of shoes by dozens of construction methods. It made these shoes of a wide variety of materials in thousands of style variations. Yet, while there was a specific shoe available for every other form of feminine activity, there was practically nothing designed and labeled for work wear. Women who work—millions of them—have been left to choose between two general types of footwear for their working hours. Dress shoes which had generally become too worn or shabby for the purpose for which they were purchased; or the so-called "sensible" and "comfort" types of shoes. The single exception to this was in the nursing field. Many manufacturers produce "nurses' shoes" in a wide range of prices. This field is profitable. Most of the footwear so classified is well suited for the needs of women in the nursing profession. Most of these shoes are not suitable for general work wear, in the opinion of foot health authorities and of employed women who were questioned during the course of this study.

It requires no argument to prove that the wearing of battered dress shoes as working footwear is highly unsatisfactory and dangerous. Such footwear, with high heels and light construction, or poorly made, is not designed for work wear.

Many of the so-called sensible, comfort, and walking shoes would be satisfactory for work wear but there are not enough of these to provide footwear for the work field in addition to the field for which these shoes are primarily designed. Furthermore, some of these shoes are clumsy and many are available only at retail prices which are generally higher than the prices paid by the average working woman for her dress shoes.

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The purely practical requirements of the potential market for women's work shoes will be discussed in another article, in which will be presented many of the findings and opinions obtained in this study. Before this is done, however, it is essential that the views of shoe manufacturers themselves be studied, for it is these manufacturers who must provide work shoes.

What Do the Manufacturers Think?

In an earlier article (H&L&S, June 13) it was shown that millions of women are regularly employed in a wide diversity of occupations and that

Indicative of the recognition of suitable footwear as a safety factor in industrial employment is this poster which appeared on the bulletin boards of Munsingwear, Inc., Minneapolis, Minn. The humorous drawing sharply emphasizes the serious point . . .

their number is increasing steadily with the increase in wartime industrial effort. It was shown that there is a large potential market for women's work shoes.

What do women's shoe manufactures think about the need for women's work shoes and the possibilities existing in this field?

To find the answer to that question, the correspondents of HIDE AND LEATHER AND SHOES interviewed hundreds of makers of women's footwear asking them pertinent questions and obtaining frank opinions in reply. Briefly it may be said that some women's shoe manufacturers feel that their customers would not be attracted by the prosaic title "work shoe"; that most agree there is a need for more suitable footwear for women who work and that such shoes could be designed attractively and made profitably. There were some sharp dissenters from this general view of the situation. There were numerous expressions of interest in the suggestion of a "work shoe" classification in the women's field and many manufacturers said they would make such shoes if this study revealed a need and a demand for them.

Space will not permit quoting all of the manufacturers who were interviewed, however, the following opinions have been selected as expressing representative views of shoe manufacturers on the pros and cons of work shoes for women.

An official of the General Shoe Corp., Nashville, Tenn., said that while he does not think that a work shoe classification is needed in the women's field, the company has experienced an increased demand for shoes for work wear, especially for its Goodyear welt walking oxford. In addition to this, it makes nurses' shoes. The firm makes a number of dress shoes adapted to work wear by women, and there has been a good demand for them. He said that he thought his firm would be interested in making women's work shoes if a need for them was shown.

"Already in the Business" International Is Interested

Already very much in the women's work shoe business, the International Shoe Co., St. Louis, produces "any type of work shoe for women" and has carried them in stock for the past eight years. The company has long made a serious study of women's shoes and executives said they were vitally interested in any new developments reported by HIDE AND LEATHER AND SHOES as a result of the magazine's study of the work field.

During the past five years, International has experienced a heavy increase in sales of nurses' shoes, and in that time sales figures have trebled. Throughout the line of work shoes is a distribution of popular features for added comfort and added wear such as steel arch constructions, arch cookies, safety box toes, rubber felt (napline) for soles, oil treated soles for flexibility, and special heel heights (12/8 being most in demand).

E-J Supt. Says Work Shoes Needed

The Endicott-Johnson Corp., another of the country's largest shoe manufacturers, makes the greater part of its women's shoes in Johnson City, N. Y., but also has women's factories in Endicott and Owego, N. Y.

The Victory Stitchdown Factory, of which Charles Crouch is superintendent, produces a huge quantity of stitchdowns, a large part of which are worn by women as work shoes. Mr. Crouch believes there should be a work shoe classification for women. A medium grade of stitchdown would make an ideal work shoe, he believes. In fact, the company makes many shoes of this type which are sold throughout the South for general work wear, including farm work. Stitchdowns have been greatly improved over the product of past years and can be improved still further, Mr. Crouch thinks.

"We put a shank in our women's work shoes," Mr. Crouch said, "but they do not contain an arch. When I came here six years ago I visited many factories in other cities to see how they made shoes. I found that many of them were making their stitchdowns just as cheap as they could. As a result they didn't have much of a shoe. They explained that a stitchdown had to be made cheaply to compete with other shoes. But to-

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WESTERN DEPARTMENT 1012 NORTH THIRD STREET, MILWAUKEE, WISCONSIN day several of those factories are out of business, while we have a large number of unfilled orders. And most of these orders are at prices which are higher than similar shoes bring."

At E-J's Women's Medium McKay Factory, superintendent Henry Rosenzweig declares that enough kinds of women's shoes are now being made to fill all needs or work wear. Although none are actually labeled a work shoe, many are suitable for such use, he says. Besides nurses' shoes, which are definitely work footwear, the factory makes high shoes, many of which presumably are worn on western farms and ranches. Many mail order house styles also run to the practical rather than the esthetic.

"Most women wear old shoes for work," says Mr. Rosenzweig. "Of couse, many such shoes are not suitable or practical. I can't imagine why many women wear shoes with cutout toes, open heels and other novelties for work, other than that they have them and want to wear them out. But it is hard to change women's habits. Apparently they show very little logic in buying shoes. We make many shoes we don't like to make. But it seems as if the average woman does not want a 'work' shoe. Style is more important.

"Women's feet are growing larger, on the average, every year. Common sizes going through the factory now are 9's, 9½'s and 10's. About the only small shoes we make are for export—to countries like Haiti and Cuba."

"They're Easy to Make"

"We've never had any production difficulties with work shoes. They are simple and easy to make. The problem is to induce women to wear them—a sales problem. To be a success, I think a woman's work shoe should be cheap or medium priced."

P. Douglas Blain, E-J sales manager, thinks that a nurse's shoe is the answer to the women's work shoe problem. "Nurses are on their feet all day. A shoe which will meet their needs should meet the needs of the great majority of working women," Mr. Blain reasons. "But not every woman will buy one kind of shoe, not until we have regimentation, and we can get along without that."

Mr. Blain concedes that for work wear under difficult conditions it is probably advisable to develop specialized shoes. Such an instance might be a shoe for wear in meat packing plants and other places where there is more or less water on the floor.

Baltimore Clothier Calls Study "Far Sighted"

Schleisner Co., Baltimore clothing firm, has worked out with the Glenn L. Martin Co. a standard uniform for the 5,000 women employes at the big Martin plant which is rushing production of planes for Uncle Sam's fighting flyers.

Lewis M. Hess, treasurer of Schleisner Co., says of "Hide and Leather and Shoes'" study of the potential market for women's work shoes:

"We are convinced that you are very far sighted in your planning for a series of articles on women's work shoes.

"Our first contacts with the industrial plants were on uniforms, and now that we have made a very successful start in the work clothing field, we are beginning to go back to the same factories and are now telling the story of work shoes. We have a number of different styles that we are featuring at the retail price of $4.98. For women doing very heavy work, we are sponsoring a safe toe shoe."

Endicott-Johnson will be glad to cooperate with Hide and Leather and Shoes or with any manufacturer who feels that he has the answer to the problem.

Brown Shoe Co. Interested in Study

The Brown Shoe Co., St. Louis, another of the leading producers of the industry, reports a growing demand for its heavy elk and calf powder shoe, designed with heavy sole leather, a plastic safety box toe constructed to take about 500 lbs., and a non-slip heel of 12/8th height. Some war factories, it was stated, are already making certain requirements as to the shoes worn by their women workers and the company feels that demands will continually increase for heavy welt types which at the same time should carry a certain amount of style. During the past two years, Brown's line of misses' shoes has been boosted to 10 times its original sales figure. Made of plumper kidskin, subject to hard wear, constructed with comfortable steel shank, arch support, and metatarsal button, this shoe is quite uniform and has been adopted by various organized units throughout the country. Brown Shoe Co. is also interested in a study of the needs of this growing market.

Falcon Shoe Co. "Enthusiastically Interested"

Walter E. Beck, sales manager of the Falcon Shoe Co., St. Louis, said that the company is "enthusiastically interested in making a heavier work shoe for women if Hide and Leather and Shoes conducted a survey and study of the subject."

Mr. Beck is certain that demands for this type of shoe are sufficient to warrant entrance into the field. At present the factory meets demands for all types of working girls' footwear with the exception of the heavy safety box toe shoe.

"Most Interested" Says A. M. Tobin

Another interested St. Louis shoeman was A. M. Tobin, executive and stockholder in six leading Missouri factories. He says that if the country is forced to accept heavy duty from its women such as the German, French, Russian, and English women must perform, then undoubtedly there will have to be a work shoe for women similar to the heavy shoes worn by men. High protective shoes, it was suggested, might possibly be the answer. At present, arch types, nurses' shoes, casuals, walking shoes, etc., serve many women who work and these shoes are not classified except as to comfort and durability. Mr. Tobin would be most interested in any survey or study submitted on the subject.

Contrary View

A contrary view was expressed by A. J. Scheu of the Hamilton-Scheu-Walsh Shoe Co., also of St. Louis. Mr. Scheu said there should be no classification for "work shoes" for women. The very term "work shoe" he pointed out, would be offensive to the majority of women, and doomed before they were tried. "Let there be work shoes but call them by some other name," pleaded Scheu, who belives that women's feet are well taken care of in the tremendous variety of health shoes, casual types (including loafers), moccasins, walking shoes to meet the demands of office workers, sales girls, waitreses, nurses, factory workers, city and country housewives, and that there is positively no need for classification since women, for the most part, will not have themselves or what they wear classified. Hamilton-Scheu-Walsh Co. is not interested in welt type shoes, e.g., the type implied by the term "work shoes."

"Most Unprofitable" Brauer Bros. Found

Supporting his opinion with experience, A. J. Brauer, Jr., president of Brauer Bros. Shoe Co., St. Louis, said his firm entered the field of work shoe production for five or six years but gave it up as most unprofitable. Only a large company can afford the upkeep and competition of varied types of shoes. Mr. Brauer states that efforts could not be concentrated when operating two types of factories. Interests were divided. Even with two complete and separate factories, one for novelties, the other for heavy welts, it seems doubtful whether a comparatively small company could meet the competition of volume plants. There was no interest on the subject from this company.

Samuels Co. Would Promote Work Shoes

Jerry Sullavan, superintendent of the Samuels Shoe Co., St. Louis, said the firm was very much interested in Hide and Leather and Shoes' study of the subject and that it would be willing to take over promotion of the work shoe idea if the times indicate a sufficient interest in this footwear classfication.

Mr. Sullavan maintains that the only classification for work shoes would be heavy factory shoes qualified for safety and foot health. He further relates that the woman factory worker dons an old, run down, worn out pair of shoes behind the machine, kicks them under the machine when finished, and actually has no interest in what shoes she wears during working hours. If properly, cleverly, and heavily promoted the demand for heavy work shoes for women might be created, says Sullavan, since there is certainly a dire need for shoes that will insure foot health and foot safety for factory workers. He also expressed his lack of optimism in regard to the future of the novelty shoe. Material shortages, coupled with rising costs as well as increased labor costs, are bound to seriously curtail production of the novelty shoe, and manufacturers of this type should be prepared to meet the coming demand for work shoes, he said. The expense of producing a heavier work shoe would be quite nominal even including the cost of extensive promotion, and would not exceed limitations placed on the average factory worker's purse, Mr. Sullavan added.

"Keen Interest"

Manufacturers and wholesalers in Los Angeles are of the general opinion that the women of the nation are entitled to special work shoes.

At California Shoes, Ltd., keen interest was shown in the Hide and Leather and Shoes' survey. G. A. Berglund said that there should be a work shoe classification for women.

"Our firm would be interested in making shoes to fit the needs of working women, if the survey should bring favorable information to light."

Philip Aronov of the Los Angeles Shoe Mfg. Co., who explained that his firm was interested primarily in playshoes and would not be interested in undertaking other types. "However, there should be a special work shoe classification for women, preferably a welt constructed shoe," he said.

"Definitely Interested" Laird Schober Reports

Laird Schober & Co., Inc., Haverhill, reported it would be definitely interested in receiving more information from Hide and Leather and

military influence in women's wearing apparel and they naturally like military heels with these outfits."

The Allen Shoe Co., also of Haverhill, reported that production at the present time is confined mostly to women's novelty shoes with high heels and that offhand it would be doubtful if the firm would want to make work shoes because they would necessarily be of such a different type from those now being made.

Dunn & McCarthy, Inc., confines its "work shoe efforts" to making nurses' oxfords of regulation design

"In addition to materials and workmanship, one reason for such a demand for this type is that the number of colors and leathers in which it is made lends a sense of glamour to even the tired working feet of women.

"We are always willing to cooperate with manufacturers for the betterment of shoes for women, who are our consumer-public, or to study such matters with others But the price element must of necessity enter into the survey, making our type shoe too high priced for the average working woman, though it would be cheaper in the long run from the standpoint of comfort, wear and all-round satisfaction, and there is a doubt as to whether or not a similar shoe, with anything like the named qualities could be made to sell for less than the retail price of $6.75."

Kramer Concurs

Louis Kramer, general manager of the California Shoe Co., Philadelphia, concurs with the views of other shoe manufacturers who believe that the time is ripe to establish a classification of women's work shoes. Mr. Kramer said:

"With the increasing number of women being employed in war industries there is a definite need for special work shoes for women at the present time. A comfortable and conservative type of shoe particularly of the 'arched' type would fit into this category. Because of the particular line we manufacture, we have noticed no increased demand for shoes suitable for 'work wear.' However, we do feel that our sandals might fit into that class since they are worn in some factories for that purpose. Many housewives wear sandals in their housework. There has been a definite increase in the demand for this type of shoe which we believe is largely due to their comfort.

"To some extent sandals are replacing certain type of work oxfords and nurse type shoes during the Summer. However, we realize the limitations of these as work shoes. The growing needs for special work shoes is apparent but we wouldn't be inclined to fulfill this need because we are not equipped for other than our present type of production."

Different View

A different view was expressed by L. N. Schwartz, president of L. N. Schwartz & Sons, also of Philadelphia. Mr. Schwartz does not believe it necessary to classify work shoes for women as such and says that

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in its factories at Auburn and Binghamton, N. Y. E. E. Lane, advertising manager, says that the company has always felt that women, unlike men, could never be successfully induced to buy shoes specifically fashioned for work.

"If you will watch the girls leaving the factory at 4:30," said Mr. Lane, "you will find them wearing everything from stripped pumps to saddle shoes. And you can safely assume that women workers elsewhere choose similar shoes. A few of our girls are wearing new looking

at play—that will feel as good on the feet at play as at work, that has no seams to hurt the foot, no unnecessary places to pinch or bind the toes (preferably unlined, for greater comfort, having nothing to rub a new corn or aggravate an old one or hurt that bunion which so many working women have acquired from short, ill-fitting shoes).

"We have an increased demand for the type of shoe described above, as a work, sport, and dress shoe combined. In short, it is an 'all-day-long' shoe.

hand-sewn moccasins of the type manufactured by his company are excellent for this purpose, especially for housewives. "The special orthopedic treatment and construction of the soles of these shoes makes them excellent for standing and walking," he says. "There has been no demand for any other type of work shoe in our experience. However, the demand for moccasins has increased in recent years. They are tending to become more and more popular with women. In some states in New England these are worn almost exclusively. Recently, as a result of trying to promote them for soldiers, we sold some to Camp Dix.

"Since we have been in the shoe manufacturing business for 35 years the process of manufacturing these moccasins is a smooth one. We work on a model of our own design. As far as the selling end is concerned, our machines are kept humming 50 weeks out of the year. Working full time in this manner would make it impossible for us to effect any changes in our present production. At one time we made a form of comfort shoe but moccasins are far more satisfactory and we intend to stick to them."

"Keenly Interested" Says John Rue

Still another Philadelphia shoe manufacturer is keenly interested in the subject of women's work shoes, and John Rue, sales manager of Howard S. Rue & Sons, Inc., says his company "firmly believes in classifying work shoes for women as such."

"The shoe best fitted for this use is the nurses' shoe type with a 12/8 heel," he asserted, adding: "We came to this conclusion because of the increased demand for this shoe in recent years. Very popular is the low-heeled (12/8) type in soft leather and plain and fancy design. An excellent selling point is their comfort.

"The nurses' shoes we manufacture are mostly made of kid leather, McKay or Cemented process. Any difficulties which arose in their production were easily straightened out, and compared favorably with the manufacture of other types of shoes. As for marketing these shoes, we can report a good demand in season. Therefore, we would certainly be interested in making other types of work shoes if HIDE AND LEATHER AND SHOES lays the groundwork We feel that 'work shoes' is our 'line' and we would like to grow along those channels."

The George Carleton Shoe Co., Inc., Haverhill manufacturer of slippers and comfort shoes for women, tersely commented: "If we got a large order, Government or otherwise, for women's work shoes, we would attempt to fill it, providing we could get the materials we would need."

"Work Shoes" Not Attractive, Stewart Says

Although Marshall, Meadows & Stewart, Inc., Auburn, N. Y., has successfully promoted a new line of "defense shoes" for women engaged in civilian defense activities, the company does not feel that "work shoes" as such would be acceptable to women. According to Weir Stewart, treasurer and sales manager of the company, women generally think of a work shoe as a rough and unattractive shoe worn by rough and unattractive factory workers. "An inaccurate conception of the situation, but none the less important in influencing public tastes," he commented. "To be successful a work shoe must be not only practical but stylish as well. The real problem lies not in producing a satisfactory shoe to meet the needs of working women, but in inducing women to accept such footwear."

The factory makes a comprehensive group of 15 styles which are suitable for work wear by members of the war service organizations and by women working in business and industry.

The shoes are sturdy yet flexible and lightweight, fit smoothly and comfortably, are suited to outdoor wear in all kinds of weather as well as indoors. Heels run from 13/8 to 16/8, most of the uppers are of smooth calfskin, a few are embossed grains, one has a suede finish. Colors are tan and black; one or two models are available in blue. In general characteristics they resemble serviceable low heeled walking shoes. The retail price range is $8.95-$9.95.

This apparently refutes the assumption that shoes for working women must be cheap shoes. Given the proper incentive, women will pay for high grade shoes even for work wear, Mr. Stewart believes. And the recent experience of the firm seems to bear out this belief. The shoes which are rapidly becoming famous as "defense styled" welts and quickly caught the public's fancy, are not new. They are styles which have appeared in the line for several years and have met with fair success. Their unusual popularity in recent months is due mainly to clever merchandising, capitalizing on current tastes and psychology.

Many shoemen believe that there is in progress a reaction from the ultra-open high styled footwear of past seasons and that more sensible models for daytime and work wear can be expected to gain in popularity as the adjustment to war psychology progresses.

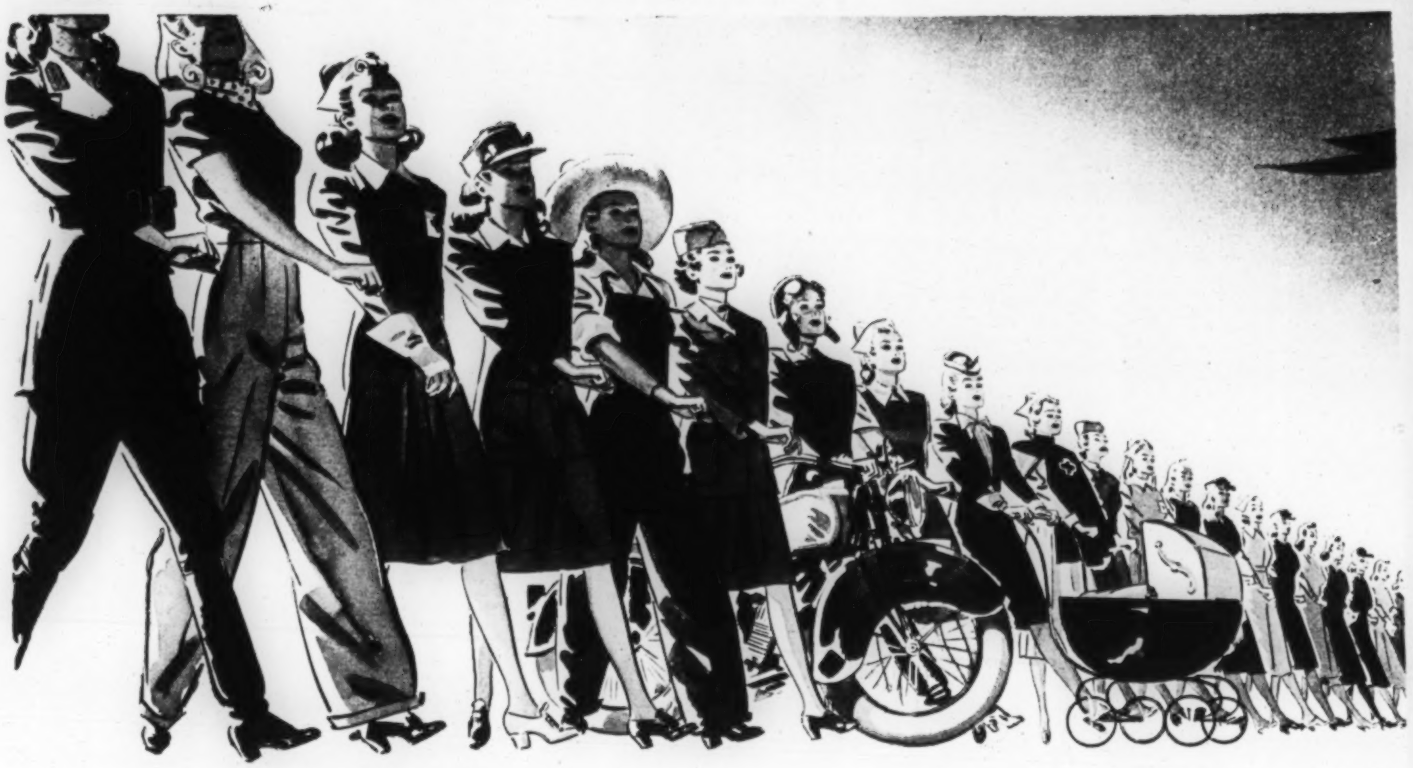
As a part of the firm's advertising campaign to induce shoe retailers to sell "defense shoes" for use with "defense uniforms," an advertisement appeared in shoe trade magazines showing a group of women defense workers wearing every kind of shoes from boots and jodphurs to moccasins and wedgies. The illustration was an actual news photo from the *New York Sun* and happened to show one of the units of the American Women's Voluntary Sevices. The moral was so plain that officials of that organization soon decided to urge members to standardize their shoes.

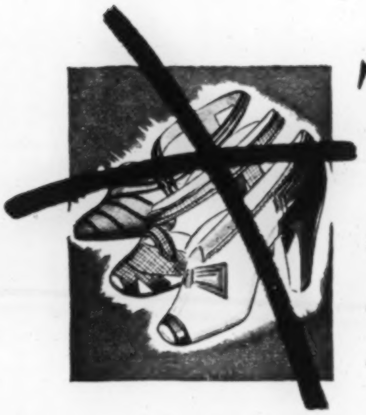
Since then the production and sale of the specifically endorsed model have increased phenomenally. Key stores throughout the country started to feature and promote the shoe. A mailing piece issued by the company is out of date already because the "60 leading quality retailers now carrying the official "AWVS Shoe" have doubled in number.

The official shoe is a six-eyelet blucher oxford with a one-piece upper and has a 13/8 built-up leather heel. It is made in black or tan calfskin and is sold to dealers

(*Continued on page* 31)

SHE
NEEDS
STRONG
SOLE
SUPPORT
MOISTURE
RESISTANT
SHAW





This fall they'll want shoes – not sandals or slippers or sloppy fashions — ***shoes.*** Solid stuff with closed toes and heels — snug, comfortable shoes for standing, walking, and wading into a job. They'll want a well supported shoe with a firm box toe, and from street wear to work shoes, the call will be for ***closed toes.*** Small shoe effects will be gained from walled lasts and vamp accents, and the flashy open toe and heel sandal will be confined to dress and party shoes for the duration.

Plan more closed toe numbers for your fall line and close 'em with Beckwith toes. Soft, firm, or flexible — light, medium, or heavy — Beckwith has the box toe for the job.

MILWAUKEE, WISCONSIN • SHERBROOKE, QUEBEC, CANADA • *AGENTS:* GEO. A. SPRINGMEIER CO.,

"Work Shoes" . . .

(Continued from page 21)

for $5.15. Suggested retail price is $8.95.

The company has been able to make its "defense shoes" without any changes in production set-up. The shoes fall into the firm's regular lines and price range. Lasts and patterns dating back four to six years have been sold to women as being the best models obtainable for work or walking. By pointing out their suitability for war work the company is making women like and ask for "work shoes" of the better type.

"Women Are Women And They Want Style"

"Women are women, and they want style. They do not like the word 'work' applied to the shoes they wear, and the women who work in factories wear the same shoe as they do on the street; you could not get them to wear anything else."

This is the consensus of San Francisco manufacturers and wholesalers of women's shoe who feel that a "work shoe" classification for women would be a dud on the market. In other words, if improved work shoes for women are to be manufactured and sold, as appears necessary to meet the needs of millions of busy American women who spend billions of working hours on their feet each year, in a wide variety of daily pursuits, then it must be done by a process of indirection. The improved "work shoes for women" will have to be offered in the guise of stylish and improved sport shoes, street shoes, walking shoes, casual shoes, gardening shoes, etc.

On this basis, and probably on this basis only, in the opinion of San Francisco shoemen, there is a prospect for the development of essential basic information, the securing of consumer cooperation, and the successful study of the needs of the growing market for women's shoes suitable for work. San Francisco shoemen, while generally skeptical, are yet very willing to cooperate with HIDE AND LEATHER AND SHOES in its enterprise to improve work shoes for women.

Pacific Shoe Co. "Would Be Interested"

Elmer M. Fry, sales manager of the Pacific Shoe Co., San Francisco, says that in his experience women do not like the word "work" applied to their shoes, and suggests that perhaps the word "practical" is more suitable. His firm has had an increased demand for a casual shoe, which it calls "California Softees." These shoes are suitable for work wear. Their construction embodies a platform sole, whcih Mr. Fry says, "adds lightness, comfort, and are a pleasure to have on your feet."

The Pacific Shoe Co. would be interested in making any salable work shoes for women, and in studying the needs of this growing market in cooperation with HIDE AND LEATHER AND SHOES.

The San Francisco firm of Buckingham & Hecht does not manufacture women's shoes. It specializes in manufacturing men's work shoes. However, it wholesales large quantities of women's shoes, which it buys from eastern manufacturers. Eli H. Wiel, president of the firm, does not believe that there should be a "work shoe" classification for women. Few women, in his opinion, would buy or wear shoes which are so classified. He points out, along with Harry Cullinane, production manager of Buckingham & Hecht, that the women working in their own factory wear the same shoes at work that they wear elsewhere.

A buyer for a department store, who overheard part of this conversation, mentioned that women working in factories insist on being shod just as stylishly as the salesgirls in stores, or stenographers in offices. However, saleswomen and others whose work keeps them on their feet a great deal of the time, he remarked, generally paid more attention to fit. And he noticed that most of them kept an older, but still stylish, pair of shoes handy for a change, in case new shoes proved to be temporarily troublesome. But he doubted that "work shoes for women," so named, would prove popular with any group of customers.

Evans Interested

Harvey Evans of L. B. Evans' Son Co., Wakefield, Mass., one of the oldest shoe manufacturing firms in the country, said:

"I'd be interested and I'm sure that other manufacturers would also be interested, in making such a shoe if HIDE AND LEATHER AND SHOES presented us with more information concerning women's work shoes and the potential market for this footwear."

Footwear of the work shoe type has been made by Evans before this, but Mr. Evans said that "two factors, price and women's refusal to wear a 'work shoe' kept us from going actively into the field.

"We have manufactured only a few lots of the 'work shoe.' Ours was a well made oxford that could be worn by nurses and other women who spend long hours on their feet.

"All of our facilities are being used at present to make slippers and of course we do not know of any increased demands for certain types of women's shoes."

Editor's Note—The next article in this series (which started in the June 13 issue), will report the views of leading shoe wholesalers and retailers in key sections of the country and also more views of manufacturers. It will be published in an early issue.

Suggest Smaller Heels to Save Rubber

S. C. Bundil, of San Antonio, Texas, suggesting that substantial savings of rubber can be effected by the adoption of smaller sized rubber heels than those now used, says:

Conservation of rubber is essential toward winning the war not only by conserving automobile tires and tubes, leaving the vital material for military purposes, but also by conserving the rubber that goes into the making of rubber heels for war workers and civilians.

Shoes on the market today, on the average, boast rubber heel sizes from 10/11, 11/11, 11/12 and some as large as 12/13-14. Assuming that there are millions of rubber heels worn by the populace, there are also tons of rubber used which are not essential to manufacturing of civilian footwear.

Heel seats can be made smaller by the manufacturers to fit rubber heel sizes 7/8 to 8/9, thereby cutting thousands of tons of rubber from the usual larger sizes.

Considering the great army of workers in our war industries who must have foot comfort that they may not be conscious of their feet by hard jarring heels, rubber heels are essential to the workers to keep them fit for a day's work.

Smaller rubber heels would not affect their efficiency in the least, while should the rubber shortage reach the acute stage that the average workingman had to walk on leather bottoms, it would affect turning out of vital war materials, resulting in lowering the day's output by tired aching feet.

Rather than to have this happen, it would be advisable to help conserve the rubber by smaller heels, so that there may be enough rubber heels to keep our workers comfortable and efficient.

A FIRST CHOICE
sole leather

TIOGA OAK

Leading makers of footwear demand Tioga Oak bottoms.

They know how well Tioga Oak Sole Leather protects feet . . . how dependable, long-wearing and comfortable it is

Sole Leather Is the Natural Foot Covering

Tioga Oak Sole Leather Is Sold in: Cut Stock; Bends; Backs; Shoulders; Bellies; Heads.

EBERLE TANNING COMPANY
Since 1867 Leathers of Highest Quality
WESTFIELD, PENNSYLVANIA

LAUB
OAK
SOLE
BENDS
BACKS
SHOULDERS
STRIPS
FLEXIBLE BENDS
STRIPS AND TAPS

95 years of experience in tanning the best.

Geo. Laub's Sons
BUFFALO, N. Y.

BOSTON SELLING AGENT
MERRIHEW AND PRATT
197 South St.

THE LEATHER MARKETS

Sole leather still dominant market factor. All military leathers, sides, calf and shearlings, in full production. Civilian leathers, despite smaller demand, still being produced in large quantities; kips and suedes most active of these.

Sole Leather

Boston sole leather tanners reported unchanged conditions. Demand continued far ahead of supply with no let-up in sight. Military and lend-lease demands piled up. Efforts were made to simplify Army sole classifications. Raw stock problem loomed more ominously.

The tightness of the western market continued very much in evidence during the past week. Demand was as large as it has been during the past weeks and no signs of any let-up were in sight. Demands from factories working on military footwear and demands from lend-lease buyers was steadily growing. The leathers left after these orders were filled were available to the civilian trade. Prices were strong with tannery run factory bends usually quoted at 44 to 45c with up to 49c heard in some cases.

The same oversold condition prevailed in the Philadelphia sole leather market during the past week. Shoe repairers and finders were vitally concerned about their supplies of leather for repair work. They are getting a great deal less (about 40 to 50 per cent) and have more business now that shoe conservation has become necessary. Realizing their need, the WPB is studying the situation in order to find a new source of leather for them. Meanwhile tanners are being swamped with more orders than they can possibly fill. Ceiling prices prevailed in a firm market. Extra heavy finding bends were quoted at 51c (A), 49c (B), and 47c (C). In the same order heavies were listed at 49c, 47c and 45c. Medium bends were 2c lower all around. Factory bends averaged 45c for tannery run.

Sole Leather Offal

Boston offal dealers continued to move all types as quickly as received with the waiting list still a long one. Some relief may come if and when service shoe heel specifications are changed. Such changes come, of course, only after long and entirely satisfactory trials of materials to be used as substitutes. From what information can be gathered, such trials have been in operation for some time but results, at this writing, were unavailable.

The situation in the western offal market showed no change this week and sellers reported no relief from the ever present demand. Sellers kept well cleared of offerings and prices were strong. The market on bellies ranged from 25c up to around 28c. Double rough shoulders were usually quoted up to 48c with single headless shoulders priced up to 42c.

Cut Stock

Boston sole cutters continue to battle for adequate supplies of whole stock. Many were cutting innersoles, others South American sole leather for their own and shoe manufacturers' accounts. Thus most kept busy. In the meantime military and civilian orders kept floors clean of all types of soles.

Attempts to fill the demands of buyers in the Middle West were being made but the usual case was that some were not getting all the soles they wanted. Business was as large as the available production would permit and there was a good interest this week in all types. Prices were strong.

Welting

Welting manufacturers throughout the Middle West were kept busy by the good demand for all types of welting. Shipments were large and the price situation was firm at around 7c for ½ by ⅛ inch stock.

Boston welting manufacturers reported excellent business on regular Goodyear welting and little interest in novelties.

½ x 5/32	......7¾	½ x 3/32	......6½
½ x 9/64	......7¾	½ x 1/12	......6½
½ x 1/8	7	½ x 2/32	......6½
½ x 1/9	7		

Calf Leathers

Despite a slower demand from civilian users, Boston calf tanners reported all types moving steadily.

SHOE FACTORY

A MONTHLY DEPARTMENT OF HIDE *and* LEATHER *and* SHOES

What About Women's Work Shoes?

By Alfred Henderson

How many women are gainfully employed in the United States? What are their occupations? What is their aggregate buying power? What are their footwear needs? Will they buy work shoes to displace the battered discards many of them now wear? How much will they pay for such shoes?

About 30,000,000 pairs of men's work shoes were produced last year, but there were not any (except nurses') which were especially designed for women who work. The number of employed women is increasing steadily; they are filling jobs in all kinds of war and civilian industries. What is the shoe industry doing about this large potential market for a new classification of footwear—a market that may probably consume many million pairs of shoes annually?

"Hide and Leather and Shoes" has been seeking the answers to these questions the past year and has taken the lead in bringing this long-ignored field to the front by publishing a series of exclusive copyrighted articles.

The staff of "Hide and Leather and Shoes" has always considered this one of the vitally important fields of study relating to footwear, and it set out to determine what the actual possibilities were in developing a market for women's work shoes. It interviewed hundreds of manufacturers, wholesalers and retailers. It received answers to detailed questions from thousands of women who work and found that they want shoes especially built for working purposes. Some designers have already offered new fashions for women in industry and trade. Leading foot health authorities have specified the needs of this neglected market.

The findings definitely disproved the negative and pessimistic thought that women are not interested in anything but "stylish" shoes. Here is a new and lucrative field that can be developed now, especially for post-war business, on a permanent basis. It will do much to improve foot-health, lessen fatigue and reduce accidents. Those who take the lead will become well established in this market.

Elmer J. Rumpf,
Publisher

"MAN'S work is from the sun to sun, but woman's work is never done." A trite old saw, to be sure, but, like many another trite old hand-me-down from some ancient sage, the truth of the observation is incontrovertible.

One of the oldest trick questions is whether women should work. Most newspapers and general magazines have had more than one fine journalistic furor over the question and there is one newspaper editor of the writer's knowledge who never misses an opportunity to denounce on any immediately plausible grounds the employment of women in gainful occupations. This editor employs women in his office and plant and has a constant string of services performed for him by working women but nevertheless he is convinced that woman's place is in the home.

Such viewpoints fail to take into consideration the rather more than modest amount of toil which is performed daily by the average housewife; a round of work that many a man would shrink at performing. It was pointed out editorially in this magazine not long ago that "women, married and single, have always worked and have often worked harder than men, and that it doesn't make much difference, in terms of labor, whether they scrub floors and change diapers, or whether they work in offices, stores, and factories." (H&L&S, Feb. 7).

Refusal to accept the bald fact that women work has been for many years the underlying reason why most women are not dressed properly for their work. While comfortable, con-

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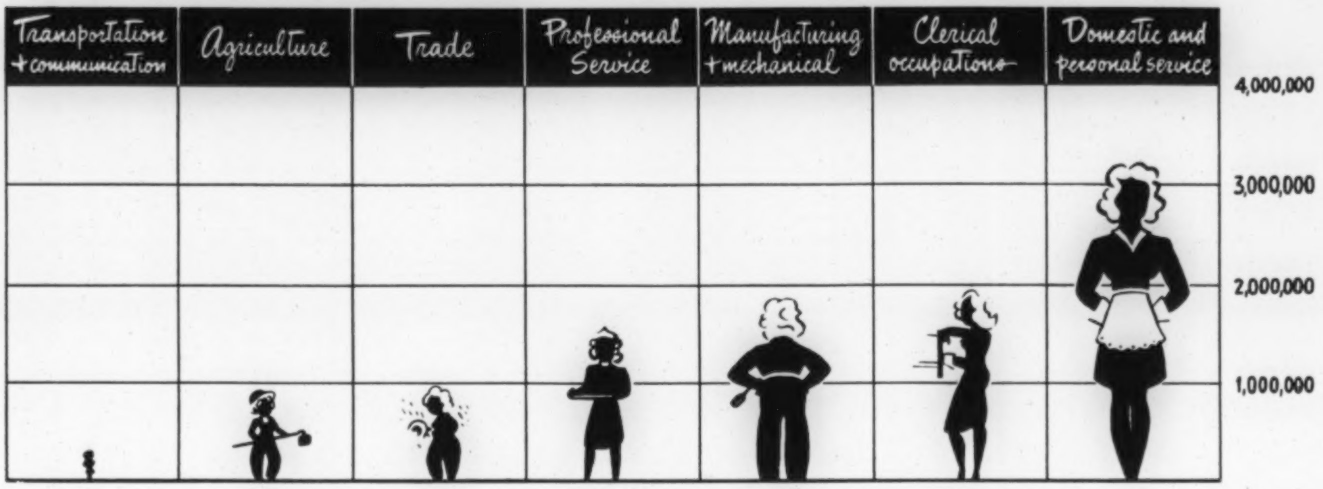


DISTRIBUTION OF FEMALE WORKERS IN KEY INDUSTRIES—1930

The ratio of distribution of female workers in key industry groups in 1930 is depicted in the above graph, while further details of the distribution of female workers by industry groups is shown in the accompanying table. In preparing this graph, 1930 was chosen as a normal employment year—after the boom of the 20's and before the effects of the depression had become appreciable.

venient, and safe clothing has been made for years for the male workers, women as a whole are not properly clothed during their working hours and—which is of more importance to the shoe industry—they most decidedly are not properly shod during those hours.

Last year the shoe industry made 32,249,177 pairs of work type shoes for men but it didn't make a single pair of shoes under a women's work shoe classification. In fact, there is no such classification recognized by the industry or by the Census Bureau as "women's work shoes."

Why Isn't There a "Women's Work Shoe" Classification?

Last year, and the year before, and for many years before that millions of American women have been gainfully employed in thousands of different jobs. When HIDE AND LEATHER AND SHOES decided months ago to find the reason why special types of shoes were not made for women who work, it found that most manufacturers had little realization of the extent of this potential footwear market and that the industry as a whole was quite fearful of suggesting to its feminine customers anything with as commonplace a name as "work shoe." Many manufacturers flatly declared that such shoes would have to be given a more glamorous title. They didn't question, however, the fact that a large percentage of their feminine customers would be unable to buy the glamorous footwear of fashion if they had not first earned the money by prosaic work of one kind or another.

In making its study of the potential market for women's work shoes, HIDE AND LEATHER AND SHOES uncovered a number of salient facts which included a study of female employment; interviews with women's shoe manufacturers, wholesalers, retailers, and stylists; questioning of women workers in many fields of employment; and discussions of the subject with foot health authorities, safety directors, plant supervisors, personnel managers, etc.

This comprehensive study showed conclusively that most working women now wear footwear which is injurious to foot health, uncomfortable, and unsafe; that there is a potential market here for a whole new

GAINFUL WORKERS 10 YEARS OLD AND OVER, BY OCCUPATIONS, AND SEX

Census Year and General Division of Occupations	Number			Per Cent Distribution			Per Cent of Total	
	Total	Male	Female	Total	Male	Female	Male	Female
Agriculture	10,471,998	9,562,059	909,939	21.4	25.1	8.5	91.3	8.7
Forestry and fishing	250,469	250,140	329	0.5	0.7	....	99.9	0.1
Extraction of minerals	984,323	893,564	759	2.0	2.6	....	99.9	0.1
Manufacturing and mechanical industries	14,110,652	12,224,345	1,886,307	28.9	32.1	17.5	86.6	13.4
Transportation and communication	3,843,147	3,561,943	281,204	7.9	9.4	2.6	92.7	7.3
Trade	6,081,467	5,118,787	962,680	12.5	13.4	9.0	84.2	15.8
Public service (not elsewhere classified)	856,205	838,622	17,583	1.8	2.2	0.2	97.9	2.1
Professional service	3,253,884	1,727,650	1,526,234	6.7	4.5	14.2	53.1	46.9
Domestic and personal service	4,952,451	1,772,200	3,180,251	10.1	4.7	29.6	35.8	64.2
Clerical occupations	4,025,324	2,038,494	1,986,830	8.2	5.4	18.5	50.6	49.4
1930, All occupations	48,829,920	38,077,804	10,752,116	100.0	100.0	100.0	78.0	22.0
Agriculture	10,665,812	9,582,666	1,083,146	25.6	29.0	12.7	89.8	10.2
Forestry and fishing	270,214	269,541	673	0.6	0.8	....	99.8	0.2
Extraction of minerals	1,090,223	1,087,359	2,864	2.6	3.3	....	99.7	0.3
Manufacturing and mechanical industries	12,831,879	10,901,527	1,930,352	30.8	33.0	22.6	85.0	15.0
Transportation and communication	3,096,829	2,872,559	224,270	7.4	8.7	2.6	92.8	7.2
Trade	4,257,684	3,585,701	671,983	10.2	10.8	7.9	84.2	15.8
Public service (not elsewhere classified)	738,525	727,939	10,586	1.8	2.2	0.1	98.6	1.4
Professional service	2,171,251	1,154,221	1,017,030	5.2	3.5	11.9	53.2	46.8
Domestic and personal service	3,379,995	1,193,313	2,186,682	8.1	3.6	25.6	35.3	64.7
Clerical occupations	3,111,836	1,689,911	1,421,925	7.5	5.1	16.6	54.3	45.7
1920, All occupations	41,614,248	33,064,737	8,549,511	100.0	100.0	100.0	79.5	20.5
Agriculture	12,388,309	10,581,685	1,806,624	32.5	35.2	22.4	85.4	14.6
Forestry and fishing	241,806	241,249	557	0.6	0.8	....	99.8	0.2
Extraction of minerals	965,169	964,075	1,094	2.5	3.2	....	99.9	0.1
Manufacturing and mechanical industries	10,656,545	8,835,698	1,820,847	27.9	29.4	22.5	82.9	17.1
Transportation and communication	2,665,269	2,549,922	115,347	7.0	8.5	1.4	95.7	4.3
Trade	3,633,265	3,160,562	472,703	9.5	10.5	5.9	87.0	13.0
Public service (not elsewhere classified)	431,442	426,606	4,836	1.1	1.4	0.1	98.9	1.1
Professional service	1,711,275	976,523	734,752	4.5	3.2	9.1	57.1	42.9
Domestic and personal service	3,755,798	1,225,395	2,530,403	9.8	4.1	31.3	32.6	67.4
Clerical occupations	1,718,458	1,129,849	588,609	4.5	3.8	7.3	65.7	34.3
1910, All occupations	38,167,336	30,091,564	8,075,772	100.0	100.0	100.0	78.8	21.2

classification of footwear—a market that could probably consume some 20 million pairs of shoes annually; that work shoes for women could be easily and profitably made and readily sold; that development of this footwear now would be a valuable contribution to the nation's industrial effort for victory and that this classification would constitute a great shock absorbing post-war market.

Everything that was uncovered during the investigation proved the value of the study and the urgency of the need for work shoes for women—call them by any glamorous name you will, but make them suitable for women who work!

Many of the leading manufacturers of women's shoes are ready and willing to make work shoes for women, they told HIDE AND LEATHER AND SHOES, if this study reveals a market for such footwear and suggests practical ways in which to meet the needs of the market.

The Market for "Women's Work Shoes"

One of the definitions of "market" is: "The opportunity for selling or buying commodities." The market for women's work shoes, within the meaning of this definition, must consist of several factors:

1. Enough working women to form a sufficiently large market for production.
2. Enough manufacturers who will produce footwear specifically designed and constructed to meet the needs of these women.
3. A desire on the part of working women for suitable footwear for their working hours (and this desire must be sufficiently tangible that it can be whetted by suitable promotion).
4. Ability of manufacturers, wholesalers, and retailers to merchandise this footwear in conjunction with other types and thereby create a profitable "extra pair" market.
5. Ability of the industry to produce such footwear to be sold at prices within the reach of these potential customers.
6. Ability to create good functional and smart designs for such shoes.

Are there enough working women to form a sufficiently large market for work shoes to make its cultivation attractive and profitable for the industry? The figures definitely answer "yes" to this question.

These figures do not take into account millions of housewives who do their daily chores in footwear that is uncomfortable and unsafe. Many of these would constitute a secondary market for the type of shoes that would be made for employed women.

Millions of Customers

The Bureau of the Census reports that in 1930 there were 10.752.116 gainfully employed women in the United States. These constituted 22 per cent of the total female population over 10 years of age, and this census report reveals definitely that the market for women's work shoes is by no means a war-created market that will vanish when the present industrial boom has passed. It also proves definitely that this market cannot be properly served by the promotion of so-called "defense shoes" which are often designed just to tie in with the wartime situation and would presumably be outmoded—by their very name if for no other reason—at the end of the war.

GAINFULLY OCCUPIED, BY STATES AND BY SEX, 1930

(The figures by the Bureau of the Census relate to persons 10 years old and over.)

State	Male No.	Female No.
Alabama	772,281	254,014
Arizona	135.325	29,971
Arkansas	548.652	119,193
California	1.943.290	557,354
Colorado	321.874	80,993
Connecticut	499,201	178.007
Delaware	77,221	20.883
Dist. of Col.	155.028	88.825
Florida	448.955	149.984
Georgia	850,219	311,939
Idaho	139,946	22.286
Illinois	2,469.216	715,468
Indiana	1.015.761	235.304
Iowa	749,313	163,522
Kansas	575,072	119.200
Kentucky	760,417	146,678
Louisiana	624.196	191.420
Maine	240.110	68,493
Maryland	515,187	157.692
Massachusetts	1,285,316	528,999
Michigan	1,567.525	359.822
Minnesota	791.833	200,965
Mississippi	613,177	231.728
Missouri	1,158.734	299,234
Montana	184.205	32.274
Nebraska	417,287	89.721
Nevada	36.982	5,902
New Hampshire	142,710	49,956
New Jersey	1,295.594	416.512
New Mexico	120.506	22.101
New York	4.108.232	1.415.105
North Carolina	868.006	272.965
North Dakota	204.090	36.213
Ohio	2.076.158	539,606
Oklahoma	698.658	129,346
Oregon	328.503	81.142
Pennsylvania	2.918.211	803,892
Rhode Island	209,343	87,829
South Carolina	480.976	206.761
South Dakota	210.343	37.310
Tennessee	763.062	195,324
Texas	1,785.059	421,708
Utah	141.016	28.984
Vermont	112.806	28,397
Virginia	697,944	182.267
Washington	538,054	126,676
West Virginia	488.254	82,198
Wisconsin	914,247	215.214
Wyoming	79.709	12.739
United States	38,077,804	10,752,116

Of the gainful workers, 35.173,370 were native whites (27,511.862 males and 7.661,508 females); 7,411,127 were foreign-born whites (6,255,071 males and 1.156,056 females); and 5.503.535 were negroes (3.662,893 males and 1.840,642 females).

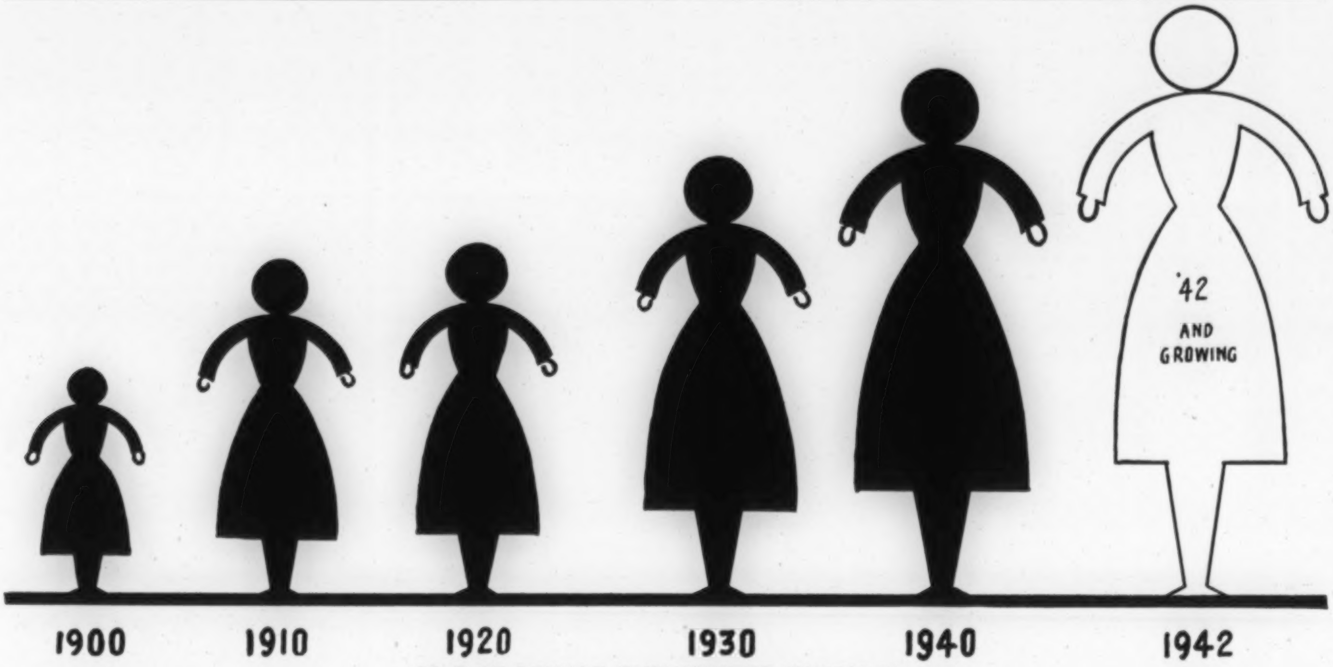
In 1920 there were 8.549.511 gainfully employed women, representing 21.1 per cent of the total female population over 10 years of age. Ten years earlier, in 1910, there were 8.075.772 gainfully employed women; 23.4 per cent of the total female population over 10 years of age. Even as far back as 1880, 14.7 per cent of all women in the United States over 10 years of age were working in occupations for which they received salaries or wages.

This should certainly prove that a substantial percentage of women have always been gainfully employed—and the trend in this direction is steadily increasing.

The trend toward increased employment of women is, of course, spurred by the wartime demand for tremendously increased industrial production and the decreasing number of male workers available to keep the wheels of industry turning at top speed. However, the trend was well established before the present boom started and there is good reason to believe that at the end of the war the number of employed women will not drop back to the point reached in 1940, though it will naturally decline from the wartime high for a number of reasons.

The Diversity of Female Employment

The statistics reveal some interesting details of the *diversity* as well as



RISE OF FEMALE EMPLOYMENT SINCE 1900

Employment of women in thousands of occupations has been steadily increasing in the past 40 years, as is shown in the above graph and employment statistics tabulated elsewhere in this article. The market for women's work shoes is steadily expanding with the rise in female employment.

the *extent* of female employment. The 1930 report of the Census Bureau gives the number of women working in major classifications of employment as follows:

Agriculture	909,939
Forestry and fishing	329
Extraction of minerals	759
Manufacturing mechanical industries	1,886,307
Transport and communications	281,204
Trade	962,680
Public Service	17,583
Professional Service	1,526,234
Domestic and Personal Service	3,180,251
Clerical Occupations	1,986,830

Further light on this diversity of occupations in which women find employment is shown in a bulletin of the Women's Bureau of the Department of Labor: "The Occupational Progress of Women, 1910 to 1930." The selected incomplete list of these occupations shown below indicates that there is scarcely any field of modern employment where women have not found jobs, and that they are working regularly as:

Actors and showmen
Advertising agents
Agents, collectors, and credit men
Air, railroad, and automobile mechanics
Apprentices in numerous building and hand trades
Apprentices in other occupations
Architects
Authors, editors, and reporters
Aviators
Baggagemen and freight agents
Bakers
Bankers, brokers, and money lenders
Barbers
Blacksmith, foremen, and hammermen
Boatmen, canalmen, and lock keepers
Bookkeepers, cashiers, and accountants
Bootblacks
Brick and stone masons
Builders and building contractors
Cabinet makers
Captains, masters, and pilots
Carpenters
Cemetery keepers
Charwomen and cleaners
Chauffeurs and truck and tractor drivers
Chemists, assayers, and metallurgists
City and county officials and inspectors
Cleaners, dyers, and pressers
Clergymen
Clerks
Clerks (other than in stores)
College presidents and professors
Commercial travelers
Compositors, linotypers, and typesetters
Construction laborers for steam and street railroads
Cranemen, derrickmen, hoistmen, etc.
Decorators, drapers, and window dressers
Delivery men
Dentists
Designers, draftsmen, and inventors

(*Continued on page 26*)

PERSONS GAINFULLY OCCUPIED, BY SEX, 1880-1930

Sex and Census Year	Total Population	Population 10 Years of Age and Over	Persons 10 Years and Over in Gainful Occupations — Number	Pct. of Total Population	Pct. of Population 10 Years and Over
Male					
1930	62,137,080	49,949,798	38,077,804	61.3	76.2
1920	53,900,431	42,289,969	33,064,737	61.3	78.2
1910	47,332,277	37,027,558	30,091,564	63.6	81.3
1900	38,816,448	29,703,440	23,753,836	61.2	80.0
1890	32,067,880	24,352,659	19,312,651	60.2	79.3
1880	25,518,820	18,735,980	14,744,942	57.8	78.7
Female					
1930	60,637,966	48,773,249	10,752,116	17.7	22.0
1920	51,810,189	40,449,346	8,549,511	16.5	21.1
1910	44,639,989	34,552,712	8,075,772	18.1	23.4
1900	37,178,127	28,246,384	5,319,397	14.3	18.8
1890	30,554,370	23,060,900	4,005,532	13.1	17.4
1880	24,636,963	18,025,627	2,647,157	10.7	14.7
Both					
1930	122,775,046	98,723,047	48,829,920	39.8	49.5
1920	105,710,620	82,739,315	41,614,248	39.4	50.3
1910	91,972,266	71,580,270	38,167,336	41.5	53.3
1900	75,994,575	57,949,824	29,073,233	38.3	50.2
1890	62,622,250	47,413,559	23,318,183	37.2	49.2
1880	50,155,783	36,761,607	17,392,099	34.7	47.3

Women's Work Shoes

(*Continued from page 18*)

Draymen, teamsters, and carriage drivers
Dressmakers and seamstresses
Dyers
Electricians
Elevator tenders
Engravers
Express and mail clerks
Factory operatives in practically all manufacturing industries
Farmers
Fishermen and oystermen
Floorwalkers and foremen in stores and warehouses
Foresters
Garage laborers
Garbage men and scavengers
Glass blowers
Guards, watchmen, etc.
Hotel keepers and managers
Housekeepers and stewards
Hunters, trappers, and guides
Insurance agents
Jewelers, watchmakers, goldsmiths, and silversmiths
Laborers in coal and lumber yards
Laundry owners, managers, and operatives
Lawyers, judges, and justices
Longshoremen and stevedores
Loom fixers
Lumbermen, raftsmen, and woodchoppers
Machinists, millwrights, and toolmakers
Mail carriers
Marshals, detectives, sheriffs, etc.
Metal filers, grinders, buffers, and polishers
Metal molders, founders, and casters
Midwives and nurses
Millers
Milliners
Miners
Musicians and teachers of music
Newsboys
Oilers of machinery
Osteopaths
Painters, glaziers, varnishers, enamelers, etc.
Paper hangers
Pattern and model makers
Piano and organ tuners
Photographers
Plasterers and cement finishers
Plumbers, gas and steamfitters
Policemen
Postmasters
Porters
Physicians and surgeons
Real estate agents
Retailer dealers in practically all fields
Sailors and deck hands
Salesmen in practically all fields
Sawyers
Servants
Shoemakers and cobblers
Stationary engineers
Steel heaters
Stenographers and typists
Stonecutters
Street railroad conductors
Street railroad motormen
Switchmen, flagmen, and yardmen
Tailors
Teachers
Technical engineers
Telegraph and telephone linemen
Telegraph and telephone operators
Tinsmiths and coppersmiths
Trained nurses
Undertakers
Upholsters
Veterinary surgeons
Waiters

The Market Is Growing

Most recent statistics compiled by the Census Bureau reveal that on Apr. 1, 1940, there were 12,846,565 gainfully employed women and an additional 1,265,538 who represented themselves as "seeking work." About 90 per cent of the latter group stated they were experienced workers. This census revealed that about 25 per

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Get into the habit of calling in a Boston Machine Works representative whenever you have a production problem. One of our men is at your service from the office nearest you.

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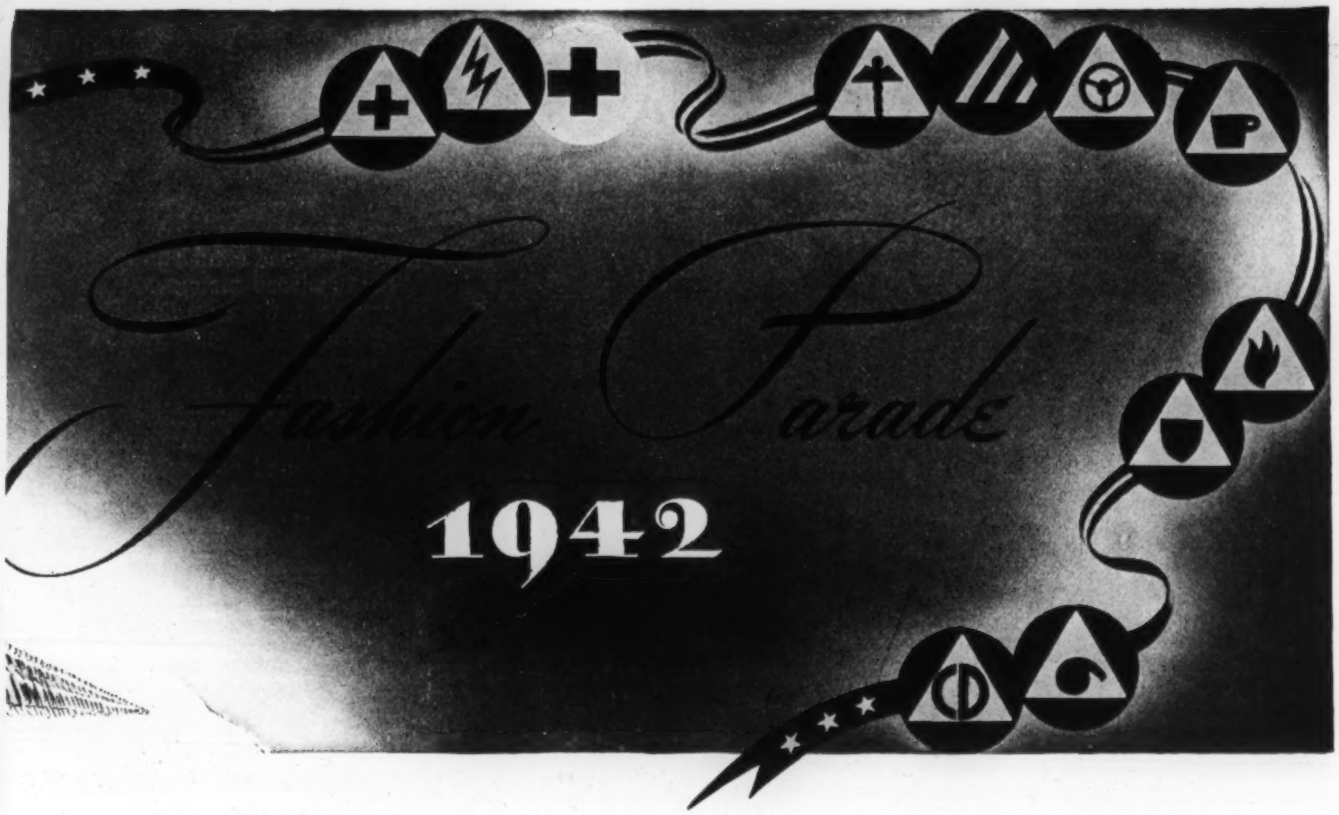

WHY BECKWITH THIS FALL?

Because . . .

— apart from the hundreds of millions of pairs used yearly that prove them to be the accepted standard by which all toes are judged —

— apart from the fact that such volume proves them uniform, durable, and foolproof —

— apart from their custom-construction covering all requirements from softies to ski boots —

— apart from their conservation of both production and delivery time (prompt shipment from 5000 dies in stock) and —

— apart from the technical service made possible by salesmen and agents everywhere —

— your keenest competitor is using them and your toe shapes are being contrasted to his. The hard-boiled boys with an eye for style are already dishing him compliments for trim lines — compliments that carry an order number.

BECKWITH MANUFACTURING COMPANY

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AR *Subsidiary*

I, OHIO • WRIGHT GUHMAN CO., ST. LOUIS, MISSOURI • C. J. SIMES, MILWAUKEE, WISCONSIN

Ladies—
WHAT STYLE
WORK SHOE
DO YOU
NEED?
PRICE?
SHAW

cent of all factory workers in the country and about 34.1 per cent of those working in retail trades are women.

A still later estimate of the female employment situation is found in the report of studies made by Miss Thelma McKelvey, chief of the labor supply section of the former Office of Production Management.

Before Pearl Harbor, Miss McKelvey said, inquiries such as the one which asked: "Where may a lady welder find work on the defense projects" were common.

Now the tables are turned, she continued, and factories are asking the Government where they can find thousands of trained women riveters, welders, and mechanics. And Miss McKelvey says these calls can be filled from the ranks of available female workers; many of them trained in the work required, and others trained in general factory work which makes them easily trainable for special war jobs.

Last July there were approximately 100 women employed in aviation plants; by Dec. 1 there were 3,000; by the end of 1942, it is believed that the 1941 figures will look insignificant. "If five and one-half million men are drawn into the armed forces, we will have to have about one and one-half million women in the aviation plants alone," Miss McKelvey declared.

"There are enough women on hand to take over these jobs," she claimed, citing figures to support her statement.

Six million women are available for war jobs if needed, she said, in addition to the more than 10 million who are now working on various jobs. She does not think, however, that more than three million women will be used for war production, unless the war lasts interminably.

From these statistics on female employment, it can readily be seen that the first test of this potential market for women's work shoes—"enough working women to form a sufficiently large market for production"—is met with positive affirmation.

Normal levels of female employment top the 10 million mark; wartime levels will soar perhaps 50 per cent above that mark; post-war trends will decline, but will probably not recede to the pre-war mark. Where can the shoe industry find a larger potential market for a single classification of women's shoes?

Money in Their Purses

What is the aggregate buying power of this market? This is difficult to answer with specific figures, but it can be roughly estimated that the aggregate weekly income of these workers as a whole at the present time lies between 150 and 200 million dollars, with the figure steadily rising. It should be considered also that the average woman with a pay envelope is highly responsive to attractive presentations of wearing apparel—and it can be assumed that these women will be responsive to comfortable, durable, well styled, and reasonably priced shoes for their working hours. The tremendous buying power of the market is obvious.

Will women workers buy an extra pair of shoes to replace the unfit shoes they now wear at work?

An extensive survey conducted by HIDE AND LEATHER AND SHOES among women workers in many representative occupations indicates that

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MEN'S BELTS
SAM BROWN BELTS

Shark Cordovan
(for tips on children's shoes)

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SUEDE SPLITS—LINING SPLITS
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Backs, Sides, Shoulders and Bellies
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CENTERS AND SIDE PIECES

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INCORPORATED IN 1901

TANNERY: ASHEVILLE, N. C.
NEW YORK: 39 FRANKFORT ST.

they will. This is especially true of factory workers and others engaged in like employment. It is also true of clerks and those whose working hours are spent on their feet under trying conditions. It is less true of office workers who seem generally satisfied with the shoes they are now wearing and who find little need to draw a line between their street shoes and their work shoes.

How much will they pay for such shoes? This same survey revealed that most employed women are willing to pay about the same for their work shoes that they now pay for dress type shoes and many of them said they will pay more. Some of them are accustomed to paying well above five dollars a pair for their shoes, and this seems to them a proper price for work shoes. Others see no reason why they should pay more than $3.00 to $5.00 a pair for the same grade they are now obtaining at these levels in dress and novelty footwear. This indicates that the work shoe market is wide open for manufacturers of all common grades of women's shoes.

The statistics prove that the potential market is large, and an analysis of the statistics and of employment trends proves that it is expanding rather than contracting.

In subsequent articles, it will be shown that many leading makers of women's shoes are ready to make footwear specially designed for the needs of working women; that the footwear needs of these workers are well defined; that shoe merchandisers believe they can take over the merchandising job of reaching this market; that women know what they want in work shoes; and that designers believe they can make such footwear attractive to the eye as well as comfortable and safe.

Editor's Note—The second article in this series—"We'll Make Work Shoes for Women"—will appear in the July 4 "Shoe Factory" section. This article will report what many leading shoe manufacturers personally told the correspondents of HIDE AND LEATHER AND SHOES when asked for their views on making women's work shoes.

Ration Shoes In New Zealand

All shoes, as well as clothing and some foodstuffs, are now being rationed in New Zealand. The plan on shoes and clothing is similar to the one in effect throughout the United Kingdom.

Substitutes Used In Norwegian Footwear

Paper uppers and wooden soles will be the footwear worn in Norway this summer if experiments now being carried on by shoe factories in that country are successful, says the U. S. Dept. of Commerce.

A woven or so-called "textile" paper is being worked on which has sufficient strength for shoe purposes. It is attractive, according to those experimenting with it, but its resistance to water is still a question.

Slightly higher prices will be asked for these paper shoes due to the complicated process necessary, although some sources claim there will be no advance in prices.

Wool Grease Is Used for Shoe Polish

Dubbing, which is being used as a treatment for all boots issued to Britain's Home Guard, has for one of its main ingredients grease wool, salvaged from the wool of sheep.

In addition to its softening the leather and keeping it waterproof, it is also a protective against gas. Tons of the material are being turned out of one London factory alone.

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SOLE LEATHER
Howes
AT ITS BEST
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11/1/42

Hide and Leather and Shoes

Shoes for Farm Women

By Mary E. Robinson

TO explain my position and interest in this subject, I am extension specialist in clothing in Missouri (Cooperative Extension Work, Agriculture and Home Economics, State of Missouri), working with approximately 50,000 women and 10,000 girls each year.

Each state has its own specialist (in many states two). In this way we come in contact with a large number of women. And we know what women want.

It is at the request of a number of these specialists meeting recently in Chicago that I am writing this short article.

There's little rest this year for the feet of six million farm women. These women are growing gardens, caring for chickens, canning, storing vegetables in larger quantities than ever before. With the great labor shortage on many farms, there are the additional duties of running tractors and combines, helping with the harvest, taking care of live stock. Across the country, too, there is the new urge to save mileage, to save rubber and to win the war by walking.

In order to do their part well in performing the various duties, farm women want shoes which help do the job, as well as insure their health. Upon foot comfort depends a large share of the efficiency and happiness of their wearers.

These needed shoes will fall into two classes. First, the shoe for general wear which may be used as a walking shoe by any woman, clerk, teacher, homemaker. This shoe will follow the fashions of the day by having lower heels. A straight inner line, sufficient draft for the thickness of the toes, and length for the foot itself (at least ½ inch longer when standing) will make for more foot comfort. A snug heel and close-fitting instep are additional considerations.

The second shoe needed for active farm labor should have sturdy qualities. The general points in shape and fitting will be the same as for the walking shoe. Heavier uppers as well as soles are features in this more rugged shoe. The weight of this shoe may detract from its comfort unless it is built to fasten above the ankle as some "girl scout" shoes, thus helping to swing the weight away from the instep.

With these shoes, farm women will be more able to make their contribution to winning the war.

AFTER HOURS-

WITH CELASTIC

en the woman war worker's
s done and the moment for
earned relaxation is at hand,
comes the desire to "dress

otwear for leisure hours
stic provides absolute toe
ort with smooth wrinkle free
nings, and in addition brings
xtra measure of style to the
by accurately reproducing
lean cut lines of the last.

ng work hours, foot comfort
otected with a Celastic box

EDITORIAL

Women's Work Shoes

About a year ago, HIDE AND LEATHER AND SHOES began a study of the practical possibilities of separating the general women's shoe classification into two groups covering *dress* and *work* types, as is done with men's footwear.

The first of a series of articles reporting the findings of that study is published in the "Shoe Factory" section of this issue. This study is important to the shoe and leather industry at large, as well as to women's shoe manufacturers. The findings reported will shatter many a cherished illusion of the women's shoe field but it is not improbable that they will have a far-reaching effect on manufacturing and merchandising operations in this field in the coming months and, more important, in the post-war period.

In the course of this study, the field staff of HIDE AND LEATHER AND SHOES personally interviewed hundreds of women's shoe manufacturers, wholesalers, and retailers representing all divisions of the industry throughout the country. Various Government bureaus cooperated. Working women in diversified occupations answered many questions about their present footwear, their desires, and the prices they will pay for suitable shoes to wear at work. Safety and personnel directors also cooperated and contributed their experiences to the material that has been gathered on the subject.

All of this material is being carefully compiled and digested and will be published in concise form in this series. Stylists, footwear fashion experts, and foot health authorities will also contribute their views on the construction, styling, and merchandising of this new classification of women's footwear; a classification specially designed and plainly distinguished as shoes for women who work.

HIDE AND LEATHER AND SHOES has found that there is a large and receptive market for women's work shoes; that many manufacturers already make footwear suitable for this classification; that working women not only want special shoes for their working hours but in many cases are willing to pay more for them than for their dress footwear; and that the shoes now commonly worn by women at work are hopelessly inadequate for the purpose.

Many shoemen are dubious about the feminine reception of footwear with so prosaic a name as "work shoes"; they believe that women want glamorous names and stylish

(Continued on page 8)

This Issue Contains

SHOE FACTORY

Published Monthly for the Shoemaking Industry

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Hide and Leather and Shoes
6/13/42

EDITORIAL

(Continued from page 5)

appearance in their shoes, whether they are worn in a factory or a ballroom. This dubiety is offset by contrary expressions from the women workers themselves whom HIDE AND LEATHER AND SHOES interviewed, but regardless of this, there is nothing to prevent any manufacturer from selecting any name he wishes for his work shoe offerings and certainly there is nothing stylish about most of the shoes women now wear at their work.

In the course of this study, many things have been carefully considered—the size of the potential market, its buying power, the practical aspects of dividing the present single women's shoe classification, the manufacturing and merchandising factors, fashion, safety, style, foot health, and even the psychological aspects affecting the study.

The series of articles now beginning will be a valuable guide to shoe and leather men who want to consider the possibilities of a new women's shoe promotion that will not—like defense shoes and WAAC footwear—become obsolete when the war is over, but will continue as one of the most important staples of the industry if properly promoted.

large percentage of manufacturers are reserving the same amount of space as previously used, a few have reduced their requirements, some have increased their space, but only two thus far have indicated that they will not exhibit.

The November fair is the eighth to be held under the joint auspices of the National Boot and Shoe Mfrs. Ass'n and the National Shoe Retailers Ass'n. It is the second to be held this year, it having been decided to change the annual dates from January to November, effective in 1942. The show will be held at Chicago's Stevens Hotel from Nov. 2 to 5 inclusive.

In a statement to the press this week, the committee said:

"The problem of selling and service under restrictions, price ceilings, and controls established by war agencies of the Government, have brought brutal realities to the shoe merchants of the nation. Manufacturers, likewise faced with material shortages, prohibitions on vital materials, restricted style regulations and insurmountable obstacles, share equally difficult problems.

"The National Shoe Fair offers the single opportunity for a great majority of both retailers and manufacturers to obtain from their resources relative to styles, merchandising limitations, deliveries, and quality facts so important in facing the future customer-retailer relations."

CIO Union Bans Shoe Strikes in Haverhill

The United Shoe Workers of America (CIO) this week told its members in Haverhill that all strikes and stoppages of work are forbidden

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Wholesale Price Trends

The table below is based on price movements recorded by the Department of Labor, Bureau of Labor Statistics. It is published to furnish a basis of comparison between rising wholesale prices in the hides and leather products group with these in other commodity groups.

For Week Ended May 30, 1942

Commodity Group	Percentage —of increase from— Week Before	Month Before	Year Before
All Commodities ...	0.1	0.1	16.0
Farm Products	1.1	1.1	37.1
Foods	0.3	—0.5	25.5
Hides and Leather Products	—0.2	—0.8	10.4
Textile Products ...	0	0	16.8
Fuel and Lighting Products	0	0.4	1.5
Metals and Metal Products	0	0.1	5.9
Building Materials..	—0.1	1.1	9.4
Chemical and Allied Products	0	0.2	16.0
House Furnishings..	—0.1	—0.1	12.7
Misc. Commodities..	—0.1	0.6	13.0

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Lape said. The company's Foot-Saver line will continue to retail at $9.95 to $13.95, and its Dr. M. W. Locke line will be maintained at a $10.95 to $13.95 retail level, Mr. Lape said.

I. Miller Making Wooden Soled Shoes

It was reported this week that I. Miller & Sons, Inc., has started to make wooden soled shoes and that it will make delivery of the new footwear in about a month.

The shoes are made with the articulated shoe sole which was recently developed by the Sterling Last Corp., New York, as a contribution to the leather conservation program. The articulated sole was described and illustrated in HIDE AND LEATHER AND SHOES in the May 2 and May 30 issues.

Shoeman on Danger List After Fall at Plant

Joseph B. Vinecour, partner in the Vinecour Shoe Co., Haverhill, was removed to a hospital Monday suffering serious injuries after falling into an elevator well at the shoe factory. He suffered a fractured skull and other injuries and was placed on the danger list at the hospital.

Mr. Vinecour had arived early at the factory and according to his brother, Benjamin, he lost his balance while leaning over the elevator

EDITORIAL

Hats Off to the Ladies

Last June HIDE AND LEATHER AND SHOES observed that normal employment of women tops the 10 million mark and that wartime levels will soar perhaps 50 per cent above that mark (H&L&S, June 13). At that time there were some readers who thought the estimate of wartime levels of female employment was rather on the liberal side. Now it seems that the estimate was highly conservative.

The Office of War Information reported this week that about 15 million women—almost 23 per cent of the total female population—are *now* gainfully employed. The OWI predicted that by the end of 1943 this total will rise to about 18 million and that the estimated six million of these that will be engaged in war industries will represent about 30 per cent of all workers in war industries.

The upward trend of female employment is important to the shoe and leather industry for two chief reasons.

Tanners and shoe manufacturers are employing more and more women to replace male workers lost to the armed forces or to more highly paid jobs in war industries. With every passing week the need for more women in the industry becomes more pressing. It is clearly evident that a large number of tomorrow's shoemakers and tanners will be women.

At the same time, the increased employment of women opens up a brand new market for the industry—a market that has long existed but has been long neglected until the urgencies of war emphasized its importance and its needs. That is the market for women's work shoes.

Until a few months ago a great many of the leaders in the industry didn't realize or wouldn't admit that there was a market for women's work shoes—suitably designed and constructed and properly identified. Emphasis was laid on glamour and fashion in feminine footwear, and the fact that 10 million women worked every day in the year and that most of them worked in unsuitable, uncomfortable, and unsafe cast-offs and dress footwear was commonly ignored.

HIDE AND LEATHER AND SHOES smashed the barriers of tradition and brought the subject of women's work shoes into the open following many months of study. Since this was done there has developed a general recognition of the existing market, its potential future, and its normal needs. The seventh chapter of a series reporting this study appears in the "Shoe Factory" section of this issue.

This Issue Contains

Shoe Factory

Page 11

- Another article of timely interest scheduled for the Dec. 14 issue is an interview with John Orr, member of the traffic committee of the Tanners Council, in which he tells "Hide and Leather and Shoes'" feature writer, George Herrick some of the "ins-and-outs" of ODT Order 18 which regulates carloadings to full capacity.
- Coming in the 1943 issues of "The Tannery" section of "Hide and Leather and Shoes" (second Saturday of each month) is a new series of exclusive features that will interest every member of the trade.
- Work shoes now available for women and work shoes being planned for women will be described and illustrated in the eighth article by Alfred Henderson reporting "Hide and Leather and Shoes'" study of women's work shoes. It will be published in the Jan. 2 issue.

VITAL TO VICTORY

Published Weekly by
HIDE AND LEATHER PUBLISHING COMPANY
300 WEST ADAMS STREET CHICAGO, ILLINOIS
Phone: CENtral 9353 Cable Address: Hideleath

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NEW YORK: Cardwell E. Belding, 20 Vesey St., Barclay 7-8783.
PHILADELPHIA: C. E. Belding, 2118 Spring Garden St., Stevenson 2060.
CINCINNATI: F. Geo. Mohr Co., O. H. Bardon, 529 Sycamore St., Main 6662.
GREAT BRITAIN: J. B. Tratsart, 93 Regent St., London W. I., Regent 0402.

SUBSCRIPTION RATES •
Annual Rates, including Hide and Leather's Blue Book: United States $5.00; Canada, $6.00; Foreign, $7.00. Single Copies, 15c.

Entered as second class matter January 13, 1939, at the Post Office of Chicago, Illinois, under the Act of March 3, 1879.

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EDITORIAL

Fake Work Shoes

At the last National Shoe Fair many manufacturers of women's novelty footwear scoffed at the suggestion that something should be done about making work shoes for women, clearly identifying them, and promoting them in the fastest growing market in the women's shoe field.

Much water has gone over the dam since last January. This week at Chicago many of the leading makers of women's shoes were frankly featuring "women's work shoes" and calling them by their proper name. Others were suggesting various types of shoes for selling to women workers. The shoes were of many distinct types and styles, most of them basically suitable for working women. They indicated that manufacturers are now preparing to develop a new classification of women's footwear—suitable shoes for women workers—and that further developments in this field may be expected soon.

At the same time, it is also evident that some manufacturers intend to cash in on the increasing demand for women's work shoes without making any effort whatever to properly serve the footwear needs of working women. Some instances of this desire to ride along with their betters without contributing anything of merit to women's work shoe development are so outstandingly flagrant as to constitute deliberate misrepresentation.

Some of the footwear that has been offered for sale under the guise of being work footwear has been so lacking in any merit whatever for the purpose that it can be expected to ruin the feet of any working women who can be hoodwinked into purchasing it; will endanger their safety and lower their efficiency on the job; and will impede the progress of work shoe development in the women's field. Some such footwear is inadequate for the requirements of women workers; some is unsuitable for most occupational conditions; and some of it is a downright fraud that should be promptly investigated, exposed, and thoroughly squelched.

In recent months HIDE AND LEATHER AND SHOES has been reporting the findings of an extensive study of women's work shoes, initiated and conducted by this magazine. This study has been generally conceded to be the most complete that has ever been made of the subject. Government agencies, women's organizations, employers, foot health authorities, and others assert that the development and promotion of suitable women's work shoes, properly identified as such, would be a valuable contribution to the war effort, as well as a profitable undertaking for the shoe industry. This is so apparent as to need no exposition.

What then of the shoeman who perpetrates a fraud on women who

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This Issue Contains

Shoe Factory

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EDITORIAL

(Continued from page 4)

are pitching into the war effort all along the industrial, commercial, and clerical front? Is he helping the war effort, or is he willingly doing his bit to sabotage it for the sake of a few pennies of profit?

It is not necessary to recount here the details of the worth-while, the doubtful, the worthless, and the fake women's work shoes now appearing. Shoemen will recognize each of these for just what it is. When they see flimsy felt and cheap leather shoes, made with open toes, shanks, and heels, sold as suitable footwear for women in war factories where normal foot hazards are far greater than in most plants, they can take their choice. They can hold their nose to protect themselves from the stench that arises from such a rotten imposition on the good health and good sense of working women, or they can root in the dump for pickings to foist on unsuspecting consumers.

American women *need* suitable work shoes. That has been proved. American women *want* suitable work shoes. That also has been proved. The shoe industry is becoming more conscious of this demand and is preparing to meet it. That is evident. A few leaches are fastening on for a free ride at the expense of their fellows in the trade and their customers throughout the country. Quick, Henry, the Flit gun!

The War Production Board recently released an official "question and answer interpretation" of many of the provisions of Footwear Conservation Order M-217.

The *Office of Price Administration* recently announced that Ration Order No. 6 applies only to men's rubber boots and rubber work shoes and that there are no restrictions on the sale of leather boots and shoes.

The *Quartermaster General's Office* recently announced that two new types of footwear will soon be issued to mountain troops who do difficult climbing on cliffs where boots with metal cleats are not satisfactory.

The *Office of Price Administration* recently gave its approval for using a formula to determine prices of types and styles of shoes brought out since March 31, 1942.

Ohio

The *U .S. Shoe Corp.*, Cincinnati, O., recently filed an answer with the *Federal Trade Commission* completely denying FTC charges that the company and its agents and dealers misused the "Red Cross" name and emblem as a trade mark on its footwear. In a recent letter to customers the firm announced that beginning with next spring the name "Gold Cross" will be used to replace its famous "Red Cross" brand name.

Died at Cincinnati, Oct. 17— *William B. Schewe*, treasurer of the

sideration of design and construction details and of some special materials which are bidding for acceptance in this field. Later on the requirements of women's protective and safety footwear will be discussed in this series.

Published Weekly by

IDE AND LEATHER PUBLISHING COMPANY

EST ADAMS STREET CHICAGO, ILLINOIS

Phone: CENtral 9353 Cable Address: Hideleath

J. Rumpf
Publisher
B. Bryan
Editor
R. Rumpf,
Managing Editor
Dallas
Fashion Editor
Williams
Asst. Editor

BRANCH OFFICES •

BOSTON: Frederick G. Moynahan, 10 High St., Liberty 4652.

NEW YORK: Cardwell E. Belding, 20 Vesey St., Barclay 7-8783.

PHILADELPHIA: C. E. Belding, 2118 Spring Garden St., Stevenson 2060.

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Entered as second class matter January 13, 1939, at the Post Office of Chicago, Illinois, under the Act of March 3, 1879.

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ABC

Member of Audit Bureau of Circulations

Safety Shoe Coupons Handled by Employers

The purchase of safety shoes by workers on short notice, was simplified this week by the Office of Price Administration which authorized employers, beginning April 5, to issue purchase certificates for safety shoes to any employe who has spent his ration stamp 17.

Any employer, whose plant is not served by a Plant Area Rationing Board, under the new system, may designate a company representative to whom workers can apply for certificates. Local War Price and Rationing Boards will, however, continue to act on individual applications if employers do not wish to utilize this new plan.

The regular application form must be filled out by the worker and if the application shows the safety shoes are needed and the worker does not have a Stamp 17, the company representative issues a certificate authorizing their purchase.

In order to get a supply of certificates for issuance to workers, the employer applies to the OPA district office serving his area. He states the total number of employes wearing safety shoes, any anticipated change in this number, the average wearing period of the shoes, an estimate of the number of pairs bought by employes in the preceding two months, and information about the jobs on which the shoes are needed. On approval of the application the district office may give the establishment enough certificates to take care of its workers' needs for two months.

April 3, 1943 — HIDE *and* LEATHER *and* SHOES

Hubbard Is Making ASA Safety Shoes for Women

It was reported this week by the American Standards Assn. that the Hubbard Shoe Co., Inc., Rochester, N. H., will probably be the first on the market with women's safety shoes meeting specifications recently established by the ASA. These specifications have been described in earlier issues of HIDE AND LEATHER AND SHOES and were the results of a project undertaken by ASA at the request of the War Production Board and the Office of Price Administration.

The ASA announced that lines of these safety shoes have been developed, or soon will be, by the Lehigh Safety Shoe Co., Gale Shoe Co., Charles Cushman Shoe Co., International Shoe Co., and the Melville Shoe Corp. The latter will be made at the J. F. McElwain factories, which are entering the production of women's shoes for the first time in their recent history (H&L&S, this issue).

The Association also said that at least a half dozen shoe manufacturers are working on women's safety shoes and following the ASA specifications, which are expected to be incorporated in the next amendment to Conservation Order M-217. Before obtaining a WPB release to buy new patterns, these firms had to agree to abide by the specifications, it was said.

Hide and Leather and Shoes

7/3/43

Hide and Leather and Shoes
6/5/43

WAS

Women Can Get Extra Safety Shoes

Women workers can now obtain safety shoes for their work without spending their regular shoe ration coupons, the Office of Price Administration announced this week. The OPA announcement stated that women's safety shoes with plastic or fibre box toe have been added to the types of safety shoes available through the issuance of supplemental ration stamps, under the same procedure that applies to men's steel toe shoes.

Due to the increasing number of women in industrial plants, addition of plastic or fibre toe safety shoes was necessary since in the past women's safety shoes generally have not been made with the steel toe box. In adding these types of safety shoes, OPA pointed out that they were being included only until such time as women's steel toe safety shoes become available.

Special stamps for the purchase of these shoes can be acquired by women workers who have spent their own stamp 17, even though there are unspent stamps held by members of their families, if the worker needs this protection on her job. In plants authorized to handle safety shoe applications, workers will be able to obtain the special shoe stamps by application at the plants. Otherwise they must apply to the local ration boards either in person or by mail.

activities. If consumers are waiting to buy Easter shoes, and distribute their purchases normally among the various grades, it is believed that the present program will stand and that the volume industry will work out its difficulties without too much trouble. If the present stiuation continues through the Easter selling season, however, the volume trade fears complete disruption unless it is given more consideration in the war program.

Some manufacturers already say that the fall styles they will show at New York—all conforming strictly

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of the New York show, has urged the trade to visit the show and talk over the present, as well as the fall situation. "If you have no need for immediate business," he advised shoe manufacturers, "tell the buyers when they may expect to secure some shoes from your factory. Courtesy costs so very little and pays such tremendous dividends."

The volume show trade has been hard hit by shoe rationing, as well as by War Production Board restrictions, materials and manpower shortages, and other war problems that have affected the entire industry. The present set-up of "across-the-board rationing" is encouraging consumers to buy higher grades of shoes, according to reports from all major retail centers. Warned that

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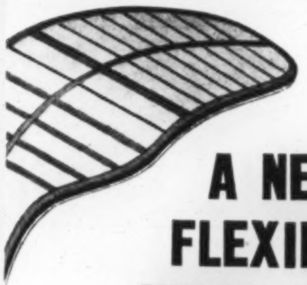
a base plate extending outwardly from the bracket and welded thereto, two reinforcing plates extending heightwise of the bracket and longitudinally of the base plates, the reinforcing plates being welded to the base plate and bracket, a hollow shell enclosing the reinforcing plates and welded to the bracket and to the base plate, and a reinforcing rib welded to the shell and to the bracket and positioned between the reinforcing plates, said rib having a portion extending through an opening in the bracket into engagement with the post.



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ing qualities of leather.

ited wood sole has a leather strip at the
an be trimmed and finished just like a
t also has a center strip of leather. Sole
same as leather soles.

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ards" of the shoe industry are already quite thoroughly grooved into well defined channels between certain price banks. It is unit rationing that has already become a disturbing factor in the industry and in the minds of consumers in regard to merchandising plans and standards.

The Office of Price Administration seems determined to disregard basic facts that existed long before there was an OPA and that continue to exist in spite of the OPA—that footwear cannot be apportioned on a pairage basis because there is no such thing as a "pair of shoes" as such. A pound of sugar is a pound of sugar. Coffee may vary in quality pound for pound. But footwear varies both in quality and in kind, and also in functional purpose.

Shoes that are made for long service and fine appearance require high grade materials and extra workmanship. They also cost the consumer a higher price than cheaper footwear with lesser wearing quality and appearance. If shoe rationing is to be operated on a fair, equitable, and sound basis, then the cheaper shoes should require fewer points because they do not have the wearing quality of their betters, and they do not require as much good material nor as much workmanship.

Across-the-board rationing is neither good rationing nor good conservation and about the only argument that seems to stand in its favor is that the OPA prefers it. That argument is not good enough to justify its continuance.

THE WEEK'S RECORD

Production

Shoe production figures released this week showed an upturn for July, after June figures fell off somewhat from the pace that had been set during the spring months. Total production for the first seven months of 1942 showed a substantial increase over a year ago, being 291,256,646 pairs compared with 285,902,470 in 1941. This week's production was slowed down somewhat by several strikes throughout the industry.

Leather production showed no signs of a decrease and was running well ahead of a year ago. Tanners kept busy making and shipping out most types of leather, although less pressure was noticeable on certain types of upper leather. Production of sole leather was at a busy pace.

Markets

Further follow-up trading in the hide markets took place, although the volume was not nearly as large as the previous period. The bulk of the business consisted of clean-up lots of hides which went to tanners holding permits. Leather markets were generally active. Soles were very much wanted, and while upper leathers received a very good demand, the situation was less tense.

In the News

Shoe Industry: Haverhill shoe workers join "outlaw strike" for more pay . . . Shoe output up . . . General Shoe has program for use of more women in plants . . . Another firm hit by Montreal strike . . . Develops new backing fabric . . . Workers flee shoe plant fire . . . Wood soles used in rural England. . . . Collective bargaining history in the shoe industry . . . NYSSRA appoints new legislation committee . . . Shoe fitters warned against spread of disease . . . E .P. Reed & Co. develops new sole.

Tanning Industry: OPA answers some hide price questions . . . Hooker Electrochemical Co. awarded Army-Navy "E" . . . OPA starts court action against packers . . . Tanners to meet on horsehide allocations . . . WLB refused closed shop at Monsanto plants . . . New members elected by ALCA . . . Old tannery destroyed by fire . . . Goodspeed leads scrap drive in leather industry . . . Wartime labor booklet given free to some groups.

Washington News: Hershey warns employers to obtain replacement workers . . . Joseph W. Byron appointed Brig. General . . . Some elastic bindings may be used by shoe manufacturers . . . DSC to buy goatskins . . . WPB ends Army-Navy priority authority . . . Kanzler succeeds Houghton as WPB operations director . . . OPA clarifies hide price schedule . . . Treasury department recognizes importance of advertising in wartime . . . "V" insignia on victory rubber heels . . . Withdraw some war risk rates.

Deaths: Clifford B. Bray . . . Maynard Moore, Sr. . . . Myer Lipson . . . James P. O'Brien . . . Anna H. Langenbrunner . . . S. Frank Sheehan.

EDITORIAL

Work Shoes, Not Gadgets, Wanted!

A young lady demonstrator working in a Detroit dime store is said to be grossing better than a thousand dollars a week in 25, 50, and 75 cent sales of a foot relief compound. Her volume is smashing all records in her field, but it is quite easily explained. Her customers come mostly from the swelling ranks of industrial workers in the industrial metropolis—and a large percentage of them are women.

This report is important to shoe manufacturers for three particular reasons. First, every cure-all and gadget for the relief of aching feet that graces the counters of drug and dime stores in the country is a direct insult, rebuke, and challenge to shoemakers. If the money spent by consumers for such temporary relief from foot distress was added to the consumers' expenditures for shoes, there would be little need for these nostrums and gadgets. Second, if all shoes were as well fitted and sold as they are well designed and made, their wearers wouldn't give the foot relief counters a second glance. And, finally, if such a tremendous sales record as that reported above can be run up by catering to the tired feet of Detroit's workers, there is a crying need for a more courageous "work shoe attitude" on the part of shoemen, employers, and workers. This is particularly true in the case of footwear for working women.

When Hide and Leather and Shoes began a study to ascertain the practical possibilities of separating the general women's shoe classification into two groups, covering *dress* and *work* types, as is done with men's footwear, it found itself exploring a field which was haunted by many bogeys, most fearsome of which was the term "work shoe" itself; a term which was seldom, if ever, mentioned in the trade with reference to women's shoes.

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Since this study began, however, and particularly since publication of the findings started, there has been a much freer discussion of the potentialities of the market for "women's work shoes." Many leading manufacturers of women's shoes are interested in a "work shoe" classification to identify footwear that is specially designed and constructed for feminine work wear. Wholesalers and retailers have reported that they can sell "work shoe" lines to their customers. Publications which formerly shuddered at the theory that women who work might be more interested in work shoes for their working hours than in more glamorous and less suitable footwear are now quite freely talking about the subject.

Government bureaus, consumer organizations, employers, and women's organizations have expressed a de-

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EDITORIAL

(Continued from page 6)

cided interest and relief that the need for properly constructed work shoes in the women's field has at last been recognized and discussed. And the article which appears in the "Shoe Factory" section of this issue proves definitely that working women themselves are keenly interested in the thought of being able to secure proper work shoes made for comfort, safety, and durability. Contrary to the now-exploded theory of the shoe trade that "women are women and all they want is style, on the job or on the street," the working women who were interviewed by HIDE AND LEATHER AND SHOES gave the style angle only a passing nod, although

Hide and LEATHER *and* SHOES

10/5/42

THE SHOE INDUSTRY

HAVERHILL SHOEWORKERS JOIN "OUTLAW STRIKE" FOR MORE PAY

BULLETIN, Haverhill, Sept. 4.—The ranks of striking shoeworkers were increased here yesterday as sympathetic union members joined the workers from 15 strike-bound plants. It was estimated that about 3,000 of the city's 4,000 shoeworkers are now striking, and observers felt that this number may be still further increased following a meeting of the strikers this morning.

Frank J. McGrath, general president of the United Shoe Workers of America (CIO) who flew here from Washington in an effort to effect a strike settlement, told the workers the strike will not be sanctioned by the union and urged them to return to work. McGrath was booed and heckled as he pled with the strikers. The strikers voted yesterday to adhere to their original demands for a 10 per cent flat increase.

The Boot and Shoe Workers Union (AFL) which was defeated several months ago in Haverhill by the United union blasted the latter and assailed President McGrath and other leaders in a vitriolic front page newspaper advertisement.

The AFL union also accused Maxwell Copelof, federal arbiter who handed down the wage decision this week which caused the strike, of being only a part-time Government employe, paid on a daily basis, and added "we are given to understand the (United) union pays him $2,000 as a free lance arbitrator and the manufacturers pay him $4,500." The union assailed the wage decision and blasted the present arbitration set up as "phony."

Thousands of Haverhill shoeworkers left their jobs in the city's two dozen plants this week, protesting a wage increase award handed down by the U. S. Conciliation Service. The increase was lower than the raise which was demanded by the workers some time ago, and benefited only about half of the 4,000 workers in the city.

The shoeworkers are members of the United Shoe Workers of America (CIO) but General President Frank J. McGrath of the union asserted the Haverhill walkout was an "outlaw strike." The union defeated the Boot and Shoe Workers Union (AFL) early this year and then entered into an agreement with the members of the Haverhill Shoe Mfrs. Board of Trade in which provision was made for arbitration of disputes, and strikes were banned.

The U. S. Conciliation service then appointed Maxwell Copelof to serve as arbiter of disputes in the local industry. Mr. Copelof delivered the wage decision which preceded the walkout this week.

Lynn shoeworkers walked out of a dozen factories a week ago to enforce demands for a wage increase, but returned after a compromise had been reached with the employers. The Lynn workers are also members of the United union, working under an agreement with a "no-strike" clause. Union officials termed the Lynn strike a "holiday." (H&L&S, Aug. 29 *et ante.*)

Under the arbitration award in Haverhill, fancy stitchers received a 10 per cent wage increase, outside cutters received five per cent, and cloth cutters received seven and a half per cent.

The arbiter said that many of the shoeworkers, particularly those in the unskilled class, have had their income increased more than 25 per cent since 1940, and that no further increases are now justified.

GENERAL SHOE HAS PROGRAM FOR USE OF MORE WOMEN IN PLANTS

The General Shoe Corp., which has headquarters in Nashville, Tenn., and operates 12 plants in Tennessee and Georgia, has adopted a definite program for replacement of men workers in its factories, as necessary, by employment of women. The company's program is outlined in the following report of the U. S. Department of Commerce, which appeared in the current issue of *Domestic Commerce.*

Before any great withdrawal of men from their operations (as a result of the draft and competition of higher wages in war work) got under way, the corporation began to prepare for an influx of women workers.

In Dec., 1941, through its 12 operating superintendents and three supervisors, the corporation made a detailed survey of its 12 factories to ascertain what operations and machines then handled by men could be operated by women. As a result, it was found that in each of two factories, 66 out of the 200 male employes could be replaced by women. Such replacements in two other factories could be made with 90 out of 180 and 26 out of 160 men.

No effort has been made to make an immediate shift from men to women workers; but as men have been drafted or have quit for better jobs, their places have been filled by women. As a result of this procedure, over half of the employes of the above four plants are now women. At the other eight plants of the corporation, according to C. C. Swinney, vice president, the percentage runs about the same, or probably a bit higher in favor of women.

In bringing about this transition, when a male worker in a top position was drafted or quit, a man in a lower position was promoted to the top job, and the man in the lower position was replaced by a woman. In this way, the principal of seniority was preserved.

The company officials were surprised to find in initiating their plan, an unlimited supply of women workers available. Also, they found that the women had better educational backgrounds than the men; and ac-

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10/5/42 Hide and Leather and Shoes

cording to the health examinations made, women were found to be in better physical condition. The company does not interview applicants who are without at least some high school training.

The majority of the women replacing men in these plants have a full high school education; some have attended junior colleges; and some, major colleges.

No effort has been made, Mr. Swinney says, to put women to work at a lower wage rate than that of the man she replaces, when her efficiency proves her to be worth what the man was getting. Most of the work is rated as piece work where efficiency counts.

The General Shoe Corp. is devoting about one-sixth of its output to war contracts. Demand for civilian shoes is also at a high peak. The rubber shortage has compelled the company to discontinue manufacture of shoes with crepe rubber soles, also shoes with white or red rubber soles; only brown or black rubber is now used.

(CONT'D FROM PAGE 20)

women. Even though a girl's husband or father may swear vociferously, she'll grow to dislike a place of business where she hears too much of this.

12. If your girls wear uniforms of any kind, get enough size variety that each girl can have a proper fit. This point can't be stressed too strongly as a means of keeping women happy.

13. Remember that most women have certain physical limitations when it comes to heavy work such as lifting. Arrange your work so that the remaining men in the plant handle those duties which are too hard for a woman.

14. If this is at all practical, pay women employes by check rather than in cash. A large plant that made a survey on this point found a majority of women preferred this method of payment and that they kept their finances in better order when checks were used.

Hide and Leather and Shoes 12/5/44

A survey by

Albert W. Gray

Analyzing the available manpower and womanpower

and a quarter million are disabled for active work; four million are between the ages of 14 and 17, and 15 and a half million boys under the age of 14. Of the male population there remain 41,800,000 available as the manpower resources of the country.

Of women, 36 million are excluded by age, disability, youth, and 10,700,000 are mothers with children under 10 years. However, 29,200,000 women are estimated as available labor. To this aggregate of 71,000,000 men and women must be added nearly half a million more women working in spite of children under 10, almost a million and a half boys and girls under 18, either working or looking for jobs, and over two million men and women above 65 years of age and still working.

It is this potential man and womanpower of 71,700,000 that must furnish the armed forces, the war production workers, and the manpower for civilian production, for food, clothing, and the other everyday necessities.

On the 11th of November President Roosevelt indicated that by the first of January, 1944, the armed forces of this country would be approximately 9,700,000. The Army today numbers approximately four and a half million, to be increased to seven and a half million; the Navy increased from its present million to a million and a half; and an additional three hundred thousand added to the Marine Corps and Coast Guard. These increases aggregate 3,800,000. According to Selective Service officials, a million and a half men are available from the 18 and 19 year old youngsters, which still leaves almost two and a half million to be taken from the older men for the fighting forces alone.

There remains, of the men workers of the country, approximately 32 million for war production, the cultivation of the farms, and the manufacture of the various civilian necessities, in addition to Government and needed by the armies and the ... of the country.

Speaking of the United States Army in 1925, Dwight F. Davis, then secretary of War, said: "The procurement and provisioning of this Army, according to proper specifications, in proper amounts, at proper prices, in seasonable time, and the orderly placing of it at the disposal of troops, is the greatest of war problems. This effort requires the services of 17 men to every one man in the fighting front."

During the first World War, England disregarded this ratio. Enrolling 38 per cent of the male workers into the army, she was left with an inadequate civilian working force. The shortage of labor skyrocketed wages. A million school teachers left their jobs and entered munition factories. Armies of workers went from city to city seeking, each time, higher wages. It ended with the intervention of the government and the replacement in industry of the more skilled workers out of the enlisted forces.

In Germany during the last war, 82 per cent of the male workers were enrolled in the armed forces. A letter of Prince Frenderburg of that country, written in April, 1918, seven months before the Armistice, tells the rest of the story. "After the war is over, the German Empire will resemble a great store which has sold out its stock. There is an absolute shortage of everything 'from cotton to sulphur, from seal bacon to platinum.' The victors in the Great War, that is to say, the Central Powers, must insert this condition in the peace terms: 'We demand a portion of the war indemnity in raw material and this immediately before the other powers have been supplied.' The victors must be the first to eat."

Manpower provisions for war production are as vital to the safety and welfare of the country as the armed forces themselves. Estimates made by Stephen Possony, in his Tomorrow's War, published a year before he outbreak of the present conflict, re 37,300,000 tons of iron and steel lone for an offensive war of one ear on a 621 mile, 1,000 kilometer, ront. U. S. Army estimates are 60,00,000 tons a year. German calcuations for the last war were a third f a ton, per month, per man, of ron and steel, with an estimated oubling of that amount for the next war."

Calculated gun and ammunition equirements are 200,000 machine uns, each using 100 shells a day; 00,000 heavy field guns, trench morars, anti-tank and anti-aircraft guns, with an average per day, per gun, of 150 shells; 150,000 tanks and armored transport cars; 150,000 airplanes of all descriptions.

The estimates of Possony are an average of 12 to 20 men for the operation, care and servicing of every tank and airplane. According to General Debeney, a small tank requires altogether 46 men for production, upkeep, and crew; an airplane 60 men.

Another military authority states, "In the battle about 80 men are required, per gun, to assure all the service necessary for the artillery, from the front line right through to the rear limit of the zone of operations."

From these and a mass of other calculations and estimates it has been determined that for every man on the front line of the fighting forces, 12 men in the rear and at home in war production work are necessary.

In a broadcast in December, 1941, in which General Hershey, Director of Selective Service, took part, it was asserted that during the Civil War for every man in the armed forces one man was needed behind the bench for the manufacture of a rifle. In the first World War five men were needed behind the lines for each soldier at the front. "Today a minimum of 14 men is the industrial and economic backbone without which the modern soldier cannot fight," remarked General Hershey, and added, "You must protect these 14 workers. Otherwise you don't have the arms to arm the one who goes forward. And you have the very big problem of trying to educate our people to understand that you must have 14

Womanpower Must Replace Manpower To Keep Plants Open

ON the first of April, 1942, the estimated population of this country was 133,899,867, with 71,700,000 the effective labor force. According to the 1940 census, about two and a half million men are over 65 years of age; about two and a quarter million are disabled for active work; four million are between the ages of 14 and 17, and 15 and a half million boys under the age of 14. Of the male population there remain 41,800,000 available as the manpower resources of the country.

Of women, 36 million are excluded by age, disability, youth, and 10,700,000 are mothers with children under 10 years. However, 29,200,000 women are estimated as available labor. To this aggregate of 71,000,000 men and women must be added nearly half a million more women working in spite of children under 10, almost a million and a half boys and girls under 18, either working or looking for jobs, and over two million men and women above 65 years of age and still working.

It is this potential man and womanpower of 71,700,000 that must furnish the armed forces, the war production workers, and the manpower for civilian production, for food, clothing, and the other everyday necessities.

On the 11th of November President Roosevelt indicated that by the first of January, 1944, the armed forces of this country would be approximately 9,700,000. The Army today numbers approximately four and a half million, to be increased to seven and a half million; the Navy increased from its present million to a million and a half; and an additional three hundred thousand added to the Marine Corps and Coast Guard. These increases aggregate 3,800,000. According to Selective Service officials, a million and a half men are available from the 18 and 19 year old youngsters, which still leaves almost two and a half million to be taken from the older men for the fighting forces alone.

There remains, of the men workers of the country, approximately 32 million for war production, the cultivation of the farms, and the manufacture of the various civilian necessities, in addition to Government and other civilian workers. The first demand on this remaining reservoir of manpower is the manufacture and transportation of the war material for the fighting forces—planes, tanks, ammunition, guns, transport cars, ships, and the vast supplies needed by the armies and the navies of the country.

Speaking of the United States Army in 1925, Dwight F. Davis, then secretary of War, said: "The procurement and provisioning of this Army, according to proper specifications, in proper amounts, at proper prices, in seasonable time, and the orderly placing of it at the disposal of troops, is the greatest of war problems. This effort requires the services of 17 men to every one man in the fighting front."

During the first World War, England disregarded this ratio. Enrolling 38 per cent of the male workers into the army, she was left with an inadequate civilian working force. The shortage of labor skyrocketed wages. A million school teachers left their jobs and entered munition factories. Armies of workers went from city to city seeking, each time, higher wages. It ended with the intervention of the government and the replacement in industry of the more skilled workers out of the enlisted forces.

In Germany during the last war, 82 per cent of the male workers were enrolled in the armed forces. A letter of Prince Frenderburg of that country, written in April, 1918, seven months before the Armistice, tells the rest of the story. "After the war is over, the German Empire will resemble a great store which has sold out its stock. There is an absolute shortage of everything 'from cotton to sulphur, from seal bacon to platinum.' The victors in the Great War, that is to say, the Central Powers, must insert this condition in the peace terms: 'We demand a portion of the war indemnity in raw material and this immediately before the other powers have been supplied.' The victors must be the first to eat."

Manpower provisions for war production are as vital to the safety and welfare of the country as the armed forces themselves. Estimates made by Stephen Possony, in his Tomorrow's War, published a year before the outbreak of the present conflict, are 37,300,000 tons of iron and steel alone for an offensive war of one year on a 621 mile, 1,000 kilometer, front. U. S. Army estimates are 60,000,000 tons a year. German calculations for the last war were a third of a ton, per month, per man, of iron and steel, with an estimated doubling of that amount for the "next war."

Calculated gun and ammunition requirements are 200,000 machine guns, each using 100 shells a day; 300,000 heavy field guns, trench mortars, anti-tank and anti-aircraft guns, with an average per day, per gun, of 150 shells; 150,000 tanks and armored transport cars; 150,000 airplanes of all descriptions.

The estimates of Possony are an average of 12 to 20 men for the operation, care and servicing of every tank and airplane. According to General Debeney, a small tank requires altogether 46 men for production, upkeep, and crew; an airplane 60 men.

A survey by

Albert W. Gray

Analyzing the available manpower and womanpower

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In 1940 and the early part of 1941 there were between a million and a million and a quarter men and a quarter to half a million women engaged in the production of war materiel. This year the men in war production work amount to 9,300,000, an increase of practically eight million in the past year and a half or two years. In that same period the number of women engaged in the same work has increased by over three million, making an aggregate of, roughly, 12,800,000 in this branch of production.

The estimates for 1943 are 6,300,000 women and 14,800,000 men for war production work. Added to this figure the 9,700,000 of the proposed armed forces, and by 1943 the total manpower of the country devoted to war and producing war materiel will be 30,800,000.

On the basis of the ratio of General Hershey, one-fifteenth of this total, approximately 2,000,000 men, will be available for the fighting line. Of the balance of 28,800,000, with the armed forces but behind the

Ontario, Que., manufacturer and retailer of shoes in Canada.

Wisconsin

Albert H. Weinbrenner, Milwaukee shoe manufacturer, recently celebrated his 50th year as owner of the firm bearing his name.

California

The *Los Angeles Shoe Mfg. Co.*, women's playshoe manufacturer. recently moved to a new plant at 3851 South Hill St., Los Angeles.

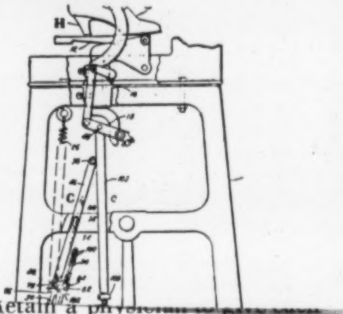
farming.

To meet the labor withdrawals from industry, two or more million women must be employed in civilian industry in 1943 than in 1940, besides an increase of women workers in the war effort of over six million, an aggregate of nine million to be recruited from the available woman power of the country.

Mark Twain, once called upon for a response to the toast, "The Ladies," said: "Where would we be, Mr. Toastmaster, if it wasn't for the ladies? We'd be scarce, almighty scarce."

ACTUATING MECHANISM FOR WORK CLAMPS

Frank Kennison, Beverly, Mass., assignor to United Shoe Machinery Corporation. Patent No. 2,282,330.



How to Use Womanpower Effectively in Wartime

14 tips by
Lucius S. Flint
On getting more efficiency from women workers in shoe factories

THERE'S no longer any question as to whether shoe manufacturers should hire more women for production jobs formerly held by men. The draft has settled that point. The important things now are how to select the most efficient women available and how to use them to best advantage. Here are 14 helpful tips on the subject from western manufacturers who have already had some months of experience with female help in new types of occupations:

1. Try to find women who live nearby. Particularly, if a woman tries to keep house as well as work on the outside, she can't afford to spend much time in transit. Mothers of young children are always happier and more efficient if they live close enough to get home early. Thus, the turnover rate is drastically reduced with neighborhood employes. Several operators get help of this type by asking old employes to bring friends or relatives and by passing the word around among neighborhood merchants.

2. If you can get them, pick young married women. They have these advantages, according to the reports of employers: They usually have more sense of responsibility than do their unmarried sisters; they're less likely to be flirtatious; as a rule, they need the work or they wouldn't be doing it—maybe a sick husband or one who's in the Army; they still have the "pep" and interest to work hard and to get along with their fellow employes.

3. Where you have to use older women, try to get ones who have worked outside the home at some time. Most manufacturers have found that older women who have lived secluded lives have difficulty adapting themselves to changed conditions and

5. Retain a physician to give each woman you hire an advance physical examination. This step not only protects you against the possibility of lawsuits but also reveals whether the employe-to-be has any female weaknesses which would make her mentally or physically unfit for the job. Plants that follow this practice report a surprising number of women turned down for nervous disorders.

6. In breaking in women who haven't previously done outside work, stress at the outset the importance of time—the fact that a minute or two lost here and there makes serious inroads on the day's work. Until this point is gotten across, many girls waste too much time in idle conversation, it is reported.

7. Give the female employe a definite day-long schedule of duties so that she'll keep busy without bothering the management for instructions every few minutes. Numerous operators say that women make excellent workers when they have their jobs cut out for them but that they lack initiative in finding work for themselves.

8. Wherever possible, let the woman employe change from one job to another at some time during the day. Women are inclined to be nervous and they're happier with change.

9. Give every girl an adequate number of rest periods during the day. Plants that are already using large numbers of women stress the fact that you have to make some allowances for feminine psychology. A girl has more confidence and consequently is more efficient if she can keep her hair tidied, apply fresh lipstick and wash her hands several times a day.

10. Be tactful in issuing instructions or in making criticisms. Women are often sensitive; they can't shrug off harsh words in the way that men do. *Never* ridicule a woman — it breaks her spirit and cuts her efficiency.

11. Be reasonably considerate about using strong language around

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On the basis of the ratio of General Hershey, one-fifteenth of this total, approximately 2,000,000 men, will be available for the fighting line. Of the balance of 28,800,000, with the armed forces but behind the lines will be 7,700,000 and 21,100,000 engaged in war production in the factories at home.

Thus there remains available out of the potential manpower of 71,700,000 for the production of food and other civilian necessities, roughly, 40,000,000; a ratio of 10 workers for every 33 of the population, or 1:3.3.

The Department of Labor has estimated a decline by 1943 of those engaged in civilian employment in 1940, of six and a quarter million and between one and two million in farming.

To meet the labor withdrawals from industry, two or more million women must be employed in civilian industry in 1943 than in 1940, besides an increase of women workers in the war effort of over six million, an aggregate of nine million to be recruited from the available woman power of the country.

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3. Where you have to use older women, try to get ones who have worked outside the home at some time. Most manufacturers have found that older women who have lived secluded lives have difficulty adapting themselves to changed conditions and association with other workers, are inclined to be cantakerous and fussy. It's always well to impress on the older woman the importance of friendliness and courtesy.

4. While there are, of course, exceptions to this rule, general experience indicates that "husky" girls—those who are just a little on the heavy side—are likely to be more even tempered and efficient than their underweight sisters. Of course an overly heavy woman shouldn't be chosen for a job where she'd have to be on her feet constantly.

5. Retain a physician to give each woman you hire an advance physical examination. This step not only protects you against the possibility of lawsuits but also reveals whether the employe-to-be has any female weaknesses which would make her mentally or physically unfit for the job. Plants that follow this practice report a surprising number of women turned down for nervous disorders.

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Selection + INDUCTION OF WOMEN IN WAR INDUSTRY PLANTS

6
Special #12

UNITED STATES DEPARTMENT OF LABOR
FRANCES PERKINS, Secretary

WOMEN'S BUREAU
MARY ANDERSON, Director

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CHOOSING WOMEN
for
WAR-INDUSTRY JOBS

Special Bulletin No. 12 of the Women's Bureau
March 1943

United States
Government Printing Office
Washington : 1943

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington, D. C. - Price 5 cents

LETTER OF TRANSMITTAL

UNITED STATES DEPARTMENT OF LABOR,
WOMEN'S BUREAU,
Washington, March 22, 1943.

MADAM: Effective methods and standards for fitting women into war-industry jobs are a vital part of the war program. Haphazard selection policies result in inefficient employees, excessive absenteeism, and high labor turn-over. As a primary aid to employers newly faced with the problem of choosing a woman-labor force, the Women's Bureau here summarizes basic principles that have proved helpful in securing satisfactory service with women workers.

The research and preparation of this report are the work of Mildred P. Crowder of this Bureau's Research Division.

Respectfully submitted.

MARY ANDERSON, *Director.*

Hon. FRANCES PERKINS,
Secretary of Labor.

521856°—43

CHOOSING WOMEN FOR WAR-INDUSTRY JOBS

Sizing Up the Job for Women
Selecting the Woman for the Job
    The application blank—The interview—
    The interviewer—Employment tests
Aids in Selecting Women
Recommendations

★

The American war program must call more and more women for service on the industrial labor front. The number of women at work increased by nearly 20 percent in the first year of active participation in the war. Further large additions are predicted for 1943. Though many of the women needed in war production have had no factory experience, they are well suited for certain kinds of important work and are eager to give their best service. Such service is possible, however, *only if they are placed in the jobs for which they are best fitted* and are advanced as they become ready for more difficult work. Haphazard hiring policies, like unsatisfactory conditions on the job, result in inefficient employees, excessive absenteeism, and higher labor turn-over. Reports from the field show that some plants have had these difficulties. Putting the right person in the right place at the start is a long step toward maximum output. Sincere interest in the employment of women and belief in their capabilities go far in developing a good program for the use of womanpower.

SIZING UP THE JOB FOR WOMEN

The first step in a sound placement program for women is selecting, on the basis of job analysis, the jobs suitable for them. The number of jobs that fall into this category far exceeds the number for which women customarily have been hired. Investigators from the Women's Bureau, U. S. Department of Labor, have found during the past year that many employers are putting women on a variety of jobs formerly never thought of as suitable for them.[1] For example, in one of the major aircraft companies on the west coast women comprised less than 2 percent of the labor force in November 1941, but over 50 percent a year later.

Job analysis reveals not only the skills required but the physical demands of tasks in terms of strength, posture, and exposure to hazards. In the process of such analysis, engineering changes may be indicated that will lessen the physical demands of the job and increase operating efficiency. The following examples indicate how conversion not only increased the operating efficiency of the jobs but made them practicable for women.

> Engineers of a middle-western company effected a saving of time and eliminated fatigue for the worker by converting a hand-operated arbor press into an air-operated machine which stakes screws in a 20 mm. shell booster. The staking machine is operated by a young woman who was on a machine for making loose-leaf binders before her employment on war work.
>
> Another company eliminated the necessity for lifting and handling an air-operated wrench by suspending it from a counter-balanced support. A woman has replaced a man on this job. She is able to operate simultaneously two such counter-balanced air-driven wrenches instead of the one operated by her male predecessor.

Types of Work Women Do Best.

Women are particularly good at fine processes requiring painstaking application. They have patience and finger dexterity and soon learn to make careful adjustments at high speed with great accuracy. They are also successful at jobs requiring the operation of large machines when the proper conveyors, automatic chucks or stops, or other mechanical aids are provided.

Plant Factors Adapted to Women Workers.

Sizing up jobs for women also involves the consideration of factors in plant organization, such as degrees and types of responsibilities, attitudes of supervisors and fellow workers toward women, suitable plans for upgrading women workers, and adequate measures for protection of their health and safety.

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[1] See for example Women's Bureau bulletins 192-1, Aircraft Assembly; 192-2, Artillery Ammunition; 192-3, Cannon and Small Arms.

SELECTING THE WOMAN FOR THE JOB

Hand in hand with the importance of selecting jobs suitable for women goes the importance of selecting the right woman for the particular job. Matching the woman to the job is the real problem with which industry must concern itself. Effective plans for this go far toward securing maximum production.

Selection procedures necessarily vary from plant to plant, due to variation in types of jobs for which women are selected and physical differences in plant set-ups. In general, desirable steps in any well-rounded selection program include: (1) Making sure the application blanks are adequate; (2) planning for a series of interviews; and (3) wherever possible providing tests specifically tailored to the job. Every plant should have competent persons to conduct these hiring procedures. Good selection standards manned by competent personnel result in better adjusted and more efficient workers.

A large eastern plant engaged in vital war work has had notable success in its recruiting program. This program was initiated by selecting a man with the ideal combination of intimate knowledge both of industrial operations and of selection and testing techniques to head the personnel department. He has a keen interest in the employment of women, and the personnel policies set up under his direction are sound and have been successful in developing efficient and satisfied workers.

THE APPLICATION BLANK

A carefully drawn application blank goes far in simplifying the selection procedure. It should furnish the interviewer, in a minimum of time, with valuable information concerning the applicant. Only information determined by job analysis to be relevant to the individual's suitability for the job should be asked for. The answers should be checked for accuracy.

Items most frequently included on the application blank are concerned with personal information such as name, address, telephone number; physical characteristics and disabilities; educational background; work history; and references. It may be desirable to add to or to subtract from this list of items, depending on the job or jobs for which the form will be used.

Such matters as religious affiliation should not be included; they tend to create ill will.

A good many plants have found it desirable, before the preliminary interview, to use a short application form when the applicant enters the personnel office. There is then no need for the applicant to fill out a more detailed form if the preliminary interview eliminates her as a possible employee.

THE INTERVIEW

The interview probably is the most important of the procedures employed in personnel selection. According to Bingham and Moore,[2] recognized personnel authorities, it serves three basic functions: Securing information, giving information, and establishing friendly relations. These functions usually are performed in not one but a series of interviews, of which the most important general types are the preliminary, the selection, and the departmental. It cannot be too frequently emphasized that the best results can be secured only when the interviewing at every stage is done by personnel that can give the woman interviewed confidence that they believe in women's capabilities.

The Preliminary Interview.

The primary purpose of the preliminary interview is to weed out in the first stages of the selection process those individuals who do not possess the minimum requirements for the available jobs. This usually can be accomplished in the course of only a few minutes if the applicant has filled out a short application form. At this time the individual who is retained as a prospective employee is given the forms that must be filled out. Appointments are made for further interviews with the proper interviewing units and for taking tests if any are to be given at this point in the procedure. It is well if this first interviewing can be done by a personable and tactful woman who has had actual experience on the job.

The Selection Interview.

The most important interview in the series is the selection interview. It is at this time that the basic evaluation of the applicant is made, and that the individual is matched tentatively with the job.

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[2] How to Interview, Harper, 1941.

The exact form of the interview varies from company to company, due to differences in plant set-up and types of jobs to be filled. In every instance, however, the interviewer should be familiar with all available pertinent information concerning the applicant, including scores if any tests have been given. If tests have not been given, the selection interviewer may find it desirable to have them administered before making a final decision. Information concerning working conditions and plant facilities should be given the applicant at this time, which requires that the interviewer be familiar with such information.

The Departmental Interview.

The importance attached to departmental interviews varies greatly from plant to plant; in many they are eliminated altogether and in others they are merely a perfunctory endorsement of the personnel department's selection for the job. On the other hand, in a large number of cases the department head makes a final selection from a group of applicants chosen by the personnel department as qualified for the job.

It is not practicable to lay down specific rules as to the merits of the departmental interview, but usually it is important that the department head who has the responsibility for this employee's work be given at least the opportunity to accept or reject the choice made by the personnel department. In a large electrical company that pays particular attention to selection, the personnel office insists that final choice of an employee be made by the foreman of the department where she will work.

THE INTERVIEWER

The success of the interview as a part of any selection program depends on the general competence of the interviewers. Recognition of this fact makes it imperative that the utmost consideration be given to the proper selection of the persons doing this work. Experience has shown that individuals most likely to succeed as interviewers possess among other characteristics a desirable combination of the following personality traits and vocational background:

Pleasing personality and cordial manner.
General knowledge of plant procedure.

Detailed familiarity with the job analysis of the jobs to be filled.
Objectivity: Ability to avoid allowing personal bias or prejudice to enter into decisions.
Ability to evaluate tests and interpret test scores.
Ability to adapt to changing conditions.
Ability to inspire confidence in the job seeker.

Some "Do's" and "Don'ts" for the Interviewer

Do —determine what it is necessary to find out in the interview and pattern the interview accordingly.
—have information from application blank and test scores well in hand *before* interviewing applicant.
—gain confidence of applicant as early in interview as possible.
—be sure that the physical surroundings are private and conducive to putting applicant at ease.
—give applicant an opportunity to talk freely.

Don't—be unduly influenced by the physical characteristics of the applicant, unless they are particularly important for the job.
—take for granted that habits in one activity are transferable to another; a neat-looking person may not be a neat worker.
—ask questions that are answered on the application blank or attempt to check their accuracy through the interview.
—give the appearance of rushing through the interview.
—ask leading questions.
—overemphasize the age factor; it is ability on the job that counts.

EMPLOYMENT TESTS

Tests must not be thought of as substitutes but only as aids to the procedures in a personnel-selection program. Tests have much to offer in a recruiting, training, and upgrading program for individual workers. They must be properly tailored to the job, and administered and interpreted by competent personnel. If care is taken on these points, tests should be particularly valuable at the present time as aids in the recruitment of women workers for war production.

Though various types of tests have been used successfully by many industrial plants, they should always be employed with caution, and only under certain specified conditions.

First, all tests should be set up or selected in terms of a specific job. A thorough job analysis and classification should precede any testing program.

Second, a testing program should always be set up and placed under the direction of someone trained and experienced in industrial testing techniques.

Third, the results should always be interpreted and used by experts only.

If a testing program is set up under these conditions, and if the program receives cooperation from the supervisors and employees, it should be a most effective aid in recruiting, training, and upgrading industrial workers.

Two of the most widely used and generally successful types of tests are the trade and aptitude tests.

Aptitude Tests.

Aptitude tests are employed in an attempt to measure a person's ability to do a specific job. They usually take the form of pencil-and-paper or performance tests. Many have been tailored to test special abilities such as motor control, including steadiness and speed and accuracy of motion; finger dexterity; dual hand coordination; and visual perception. Others have been designed to test general mechanical comprehension. Those which attempt to measure general mechanical ability are somewhat discredited. This is because of the variety of skills needed for the various industrial jobs.

The O'Connor finger-dexterity test is an example of a performance test which has been used extensively in testing for many factory jobs specifically requiring dexterity of the fingers. The equipment consists of a metal plate, into which 100 holes have been drilled, and a collection of small metal pins, 310 in number. Each hole is large enough to hold three pins. The applicant is required to place the pins three at a time in the holes until all are filled. The score is one-half the total of the time taken to complete the first half of the plate plus 1.1 times the time taken to complete the second half.

Trade Tests.

The trade tests have proved useful in measuring a person's familiarity with a specific job, and in indicating her knowledge of certain terms, tools, apparatus, and general job procedures. As such they are valuable in eliminating those individuals who exaggerate or overrate their abilities. In training courses they may be used as checks on the effectiveness of the course and the progress of the individual. The United States Employment Service has found trade tests useful in its placement program. However, it is important to remember that they measure only a person's *knowledge* about a job and not her *ability to do* the job.

The following questions, designed to test an individual's knowledge of lathe operations, are typical of the questions included in the average trade test:

> What are the three methods for turning and boring tapers in the lathe?
>
> Which is the most accurate of all types of chucks?
>
> What does the lathe carriage include?

Intelligence and Temperament Tests.

Besides aptitude and trade tests, intelligence and temperament tests sometimes are used as aids in placement procedures. Intelligence tests alone seldom prove useful in industry, but when used with aptitude and trade tests they can add valuable information. It is found that if an individual rates high in intelligence but low in mechanical ability, she is likely to become a dissatisfied worker if placed in a routine job. She may be more successful in a job requiring more abstract intelligence. The United States Employment Service uses parts of intelligence tests in its aptitude and trade tests with satisfactory results.

A few plants have used temperament tests rather extensively in their placement programs. However, relatively slight progress has been made in this realm of testing; hence it should be used with the greatest caution and only when other selection procedures fail to produce the desired results.

AIDS IN SELECTING WOMEN

Large industrial plants with sufficient financial resources to hire well-trained employment personnel should encounter little difficulty in setting up personnel-selection procedures to fit their particular needs. However, many industries are not themselves equipped to follow all the desirable steps in a good personnel-selection program. For these a number of services are available.

The Women's Bureau will on request go into a plant and analyze its jobs with a view of determining their suitability for women. The Bureau has done this on a considerable scale in the aircraft, the machine-tool, and other industries newly employing many women. The Bureau occupation experts suggest which jobs are suitable for women or can be made so with certain engineering changes. The largest service and the one most widely spread geographically is the United States Employment Service. There are also private organizations, such as the Psychological Corporation, which act as consultants in setting up testing programs and which service employers with regard to setting up personnel-selection programs.

RECOMMENDATIONS

For successful selection of women for war-industry jobs, the Women's Bureau recommends:

1. Prior to selecting women for the jobs, a careful analysis of the plant should be made to determine:
    - *a.* Which jobs are suitable for women.
    - *b.* Which jobs can be made suitable for women.
    - *c.* What changes are necessary in conditions surrounding the job, as for example in height of seats or benches, in weight of machine parts or of products to be handled, in installation of mechanical lifts, and so forth.
2. The persons who are to select women should have the following qualifications:
    - *a.* Detailed knowledge of the jobs to be filled and of conditions in the plant.
    - *b.* General knowledge of the types of work for which women ordinarily are fitted.
    - *c.* Interest in women and belief in their capabilities.
    - *d.* Competence in interpreting such tests as may be used in selecting women.
    - *e.* Freedom from personal prejudices, and ability to inspire confidence in the job seeker.
3. The procedures for selecting women should be carefully planned in advance, and may well include:
    - *a.* Provision of simple and adequate application blanks.
    - *b.* A series of interviews, with purposes as here described.
    - *c.* Tests rigidly tailored to fit the specific job.

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Special #14

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WHEN *You Hire* WOMEN

U. S. DEPARTMENT OF LABOR
Women's Bureau
Special Bulletin No. 14
1944

FOREWORD

This is addressed to employers hiring women for production jobs.

The women workers coming into industry now are chiefly inexperienced so far as factory work is concerned, and many women are wholly without work experience of any kind.

The examples were chosen to illustrate how some employers have met specific problems, but they will not be *the* answer for every individual employer. In most cases the examples have been selected from Women's Bureau schedules of plants visited.

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The Women's Bureau will send on request its complete list of war publications. Occupational surveys have been made of the following war industries: Aircraft assembly and aircraft engines, artillery ammunition, instrument-making, machine tools, cannon and small arms, steel mills, shipbuilding and naval repair. Various other industries were included in a State-wide survey made in New Jersey in 1942.

Single copies of special bulletins and all mimeographed material may be obtained from the Women's Bureau of the U. S. Department of Labor. Larger numbers of bulletins may be ordered from the Superintendent of Documents, Washington 25, D. C., at prices listed. A discount of 25 percent on orders of 100 or more copies is allowed.

Women's Bureau pamphlets on standards for women's working conditions (and related subjects) include the following:

Lifting Heavy Weights in Defense Industries. Spec. Bul. 2. 5 cents.
Safety Clothing for Women In Industry. Spec. Bul. 3. 10 cents.
Safety Caps for Women in War Factories, with illustrated supplement. Spec. Bul. 9. 5 cents.
Washing and Toilet Facilities for Women in Industry. Spec. Bul. 4. 10 cents.
Women's Effective War Work Requires Time for Meals and Rest. Spec. Bul. 5. 5 cents.
Night Work for Women and Shift Rotation in War Plants. Spec. Bul. 6. 5 cents.
Women's Effective War Work Requires Good Posture. Spec. Bul. 10. 5 cents.
Hazards to Women Employed in War Plants on Abrasive-Wheel Jobs. Spec. Bul. 7. 5 cents.
Effective Industrial Use of Women in the Defense Program. Spec. Bul. 1. 10 cents.
Absenteeism. (Mimeographed.)
The Woman Counselor in War Industries—An Effective System. Spec. Bul. 16. 5 cents.
Standards for Maternity Care and Employment of Mothers in Industry. (Multilithed.)

WHEN YOU HIRE WOMEN

Today women—hundreds of thousands of them—are at work in war industries. Unafraid of the hard, tedious, and dangerous jobs, they are working in shipyards, in aircraft and instrument factories, in arsenals and steel mills.

World War II, with its great influx of women into jobs previously marked "men only," presents both management and labor with many new and puzzling problems. Employers may benefit by reading of the successful experiences of others in employing women, and the essential steps in successful induction and utilization of women in war industries, that are presented in this pamphlet.

> *"We didn't want women, but now they're here we've found they are just as fast and just as capable as the men. They are all right."*

First —Sell the idea of women workers to present employee staff—the foremen and men workers.
Second—Survey jobs to decide which are most suitable for women.
Third —Make adaptations of jobs to fit smaller frames and lesser muscular strength of women.
Fourth —Provide service facilities in the plant to accommodate anticipated number of women.
Fifth —Appoint a woman personnel director to organize and head a woman-counselor system.
Sixth —Select women carefully and for specific jobs.
Seventh—Develop a program for the induction and training of women.
Eighth —Establish good working conditions.
Ninth —Supervise women workers intelligently.
Tenth —Give women equal opportunity with men.

WHEN YOU HIRE WOMEN

FIRST—Sell the idea of women workers to present employee staff—the foremen and men workers.

The foreman's cooperation must be secured; men workers' cooperation should be won before women are employed.

One company determined that its major labor shortage lay in the skilled occupations and that they would begin the employment of women by seeking women of ability to train for skilled jobs. They called together the men who did the skilled work, explained the situation, promised each man as good or a better job if a woman took over, and asked each man to bring a woman relative whom he regarded as capable of holding his job. It became a matter of pride on the part of each man to have his woman substitute succeed, so no effort was spared in teaching her his work. The company has developed a nucleus of skilled, respected women and is regarded as an excellent place in which to work by both men and women.

A shipyard called its foremen together, the labor stringency was discussed, and the foremen themselves decided it was advisable to employ women. They in turn sold the idea to the men in their respective departments. Though this yard had been strictly a male domain, the men have been exceptionally cooperative. Another shipyard distributed to every foreman mimeographed material which contained the statement, "Half the people in the world are women—your mother, wife, sister, daughter. The women who are coming into the plant are just like them."

A special training program for the supervisory staff of a large chemical company emphasized two points—(1) the necessity of bringing women into the operative jobs, (2) the necessity of the foremen making the women feel that they were really helpers and not just nuisances.

Sometimes foremen and fellow workers need to be shown that women can do the job before they will cooperate.

A machine-tool plant chose from its factory workers one woman who seemed to show the most promise. She was used as a "laboratory experiment," the director said, with the idea that if she succeeded she could then act as a supervisor or women's counselor in case a large number of women were hired. This woman was tried out on one job after another on a wide variety of machines. The director reported that she was successful in almost all of them. As a result, the company foremen were convinced that women could successfully undertake almost any of the jobs that had been performed by men.

In an aircraft plant, the foreman of a department where the two first women to be hired were placed said, "I honestly don't believe any of us expected them to last the day. The office had talked me into taking them on, and I agreed with the leadmen that we'd give them a fair trial. And we meant 'fair trial,' no special favors, no babying. These two girls came in. I handed them each a bucking bar, teamed them with a couple of good guys, and told them to get busy. When I walked by an hour or two later I expected to see a couple of tired girls. I was pretty surprised to find the girls had the guns, and the boys were bucking for them. Next day I teamed the girls together, and they're still at it, doing as well as anyone could ask." The performance of those girls sold that foreman on the use of women.

In another establishment, where the superintendent of the plant realized early that he would need to recruit women, the following incident was reported. When the first women taken on had been trained, the foreman of machine work rushed to the superintendent and said, "Where have I been all these years? Why, these women are easier to train than men and can do finer work."

SECOND—Survey jobs to decide which are most suitable for women.

Base choice on successful experience of other firms, and on outstanding characteristics of women.

The Women's Bureau has records of women's success in specific types of jobs in many industries covering many years. It is studying current experiences every day. These data are available on request to those who need them for war service or an essential civilian activity. Application of others' experience, however, must take into account the conditions of operation in each plant. Women's Bureau representatives are available to a limited extent to give immediate assistance.

In an excellent job analysis in a gun plant, the following procedure was followed: Women were asked to lift repeatedly weights of varying amounts while in a sitting and in a standing position. The results were plotted and it was found that fatigue was noticeable at the point where 18 to 21 pounds was lifted from 20 to 25 times an hour. Eighteen pounds was set as the limit for women where direct lifting of parts, fixtures, and arbors was done repeatedly. Another test was made by the company on operations where parts and fixtures had to be slid on the machine bed, not lifted. It was found that when the boxes were handled only occasionally, 35 pounds was not too heavy for women to lift and this amount was fixed as the limit under such conditions.

A chemical company in the fall of 1941 undertook a survey of jobs in its many plants, when it decided women probably would have to be employed, and investigated the experience of other firms that had employed women for years in communities where the company had plants. The survey of its own jobs brought out in detail the description of each man's job, whether it could be filled by a woman, and if so, by a slight or a moderately husky woman. The survey noted such factors as (1) the location of the job (to guide the plant personnel department in its placement of women to work in pairs, as no woman would be assigned singly to a department otherwise staffed with men);

(2) whether the building was in an isolated area of the plant; (3) the distance of the job from the proposed location of women's washrooms; (4) type of work-companions the women would have; (5) whether the manufacturing divisions were indoor or outdoor; (6) the general working conditions; (7) hazards; (8) fatigue factors; (9) whether the employee was required to stand most of the time. On completion of the survey, jobs were classified as to degree of practicability for women: Class 1, most easily filled by women, such as those requiring skill of hands or quickness of action; and Class 2, less desirable for certain types of women, such as those involving heavy work

THIRD—Make adaptations of jobs to fit smaller frames and lesser muscular strength of women.

Adapting the job to women may mean re-engineering, job break-down, or both. Women's work must be done without strain or undue fatigue if they are to be employed continuously.

A drill manufacturer installed a conveyor system, electric-button controls instead of levers and wheels, platforms to bring about better relation of arm to machine-bed.

A steel-castings foundry eliminated much heavy lifting by reducing the size of shovels, dumping carts, and sand buggies, and installing chain hoists.

A machine shop designed fixtures and bench vises to hold parts for filing that formerly were held by hand.

An engine-parts manufacturer broke down operations so that light work could be segregated from heavy work.

Engineers of a machine-tool company put a new lever on a special spinning lathe so that it could operate with 70 percent less exertion than before.

An aircraft plant that had steel jigs too heavy for women to lift replaced them with masonite jigs weighing less than one-tenth as much.

Suspending an air-operated wrench from a counter-balanced support eliminated the necessity of lifting and handling it. A woman replacing a man in the use of the wrench was able to operate two such wrenches simultaneously instead of the one formerly operated by the male employee.

FOURTH—Provide service facilities in the plant to accommodate anticipated number of women.

Service facilities are related directly to the most effective utilization of women.

Washrooms and locker rooms, toilets, and rest rooms should be planned for, after consulting standards recommended by authorities in these fields. The Women's Bureau calls attention to the recommendations of the American Standards Association in these matters, and to leaflets of the Bureau that set forth the standards together with observations based on the Bureau's investigations of working conditions of women.

In a foundry that took on a considerable number of women, the second floor of the men's recreation building, which is adjacent to the foundry, was converted into a rest room for women. The rest room is spacious and airy, having many windows. One end of the room is furnished with comfortable chairs, several davenports, and tables. The back of the room contains the lockers, toilets, and showers. In addition, toilet and washroom facilities have been built at intervals in the plant, either by partitioning off floor space or by constructing a balcony washroom.

A shipbuilding company has provided excellent rest rooms for women. They are clean, have leather chairs and lounges, tables where lunches may be eaten. The washrooms also are clean, well lighted, ventilated; many washbasins, hot and cold water, soap and paper towels, mirrors; metal lockers. Toilets are enclosed.

In a steel plant considerable thought is given to providing facilities for women, though in the various mills scattered throughout the large area, some of the units are new and roomy and some are not. A few have been built up above the main floor, but are approached by railed and well-guarded stairs. One had to be built at considerable height (two flights of stairs, steep but safe). All have proper equipment and are kept clean. In one of the mills there is the following example of combined service facilities for women: One room has toilets, washbasins, and a large spray-fountain; another has showers; a third, many full-length mirrors. The rest room is carpeted, has two chaise longues and two easy chairs, a long shelf and mirror. Another room has a long table for the use of the girls at lunch; a deep sink where the girls keep their soft drinks cool in water; and a 2-plate electric hot plate for cooking. All rooms have tile walls, linoleum floor covering, good light and air, and are cheerful and attractive. Even the smaller, more makeshift facilities of this company are so arranged and divided that there is a little rest room and place to eat and to cook separate from the toilet and locker-room spaces.

A chemical company had to start from scratch to provide the necessary service facilities for women. This involved remodeling present structures or units, or erecting frame structures similar to the old wooden schoolhouse with the cast-iron stove in the middle. Lockers provided for women were larger than those for men because of bulky coats and additional garments women wear. Shower stalls were partitioned or curtained. Make-up cases, odds and ends, and other incidentals were provided, especially mirrors; the assistant director of industrial relations said, "A man can put on his tie or comb his hair reasonably well by looking in a window, but a woman must have a mirror or she is most unhappy."

In a steel mill where matrons go constantly from one toilet to another to check on cleanliness, the Women's Bureau agent reported that all were in good condition. In another, a matron in each washroom has charge of seeing that supplies are on hand always and supervises the cleaning of the room (all very clean).

In an aircraft plant, all the toilets are sterilized several times in each 24-hour period, after each meal period and after each change of shift. Very thorough inspections are made of the cleanliness of the rest rooms.

FIFTH—Appoint a woman personnel director to organize and head a woman-counselor system.

The head of women's personnel and the woman counselors must be given well-defined status and duties that are accepted by department heads, foremen, and unions and made known to men and women workers.

Employment of large numbers of women with no previous shop experience at a time when foremen are overwhelmed with production problems necessitates a decentralized personnel service to adapt women to factory conditions and cope with many matters that cause absenteeism and labor turn-over.

A large ammunition plant, with thousands of women employees, put into practice an effective counseling system, with a director, assistant director, area [roving] supervisors, and consultants [counselors]. There were two consultants in each building and on each of the three shifts; they rotated with the shift in order to remain with the same group of workers. The consultants assisted in induction of new women workers, job transfer, transportation and housing problems, child-care and other personal difficulties, and conducted exit interviews to discover causes of turn-over and if possible prevent terminations.

Appointment of a woman as the assistant personnel manager is the plan of a large company for each of its plants. Where it is impossible to carry this out, either because of the small number of women workers or inability to obtain immediately the proper type of woman for such position, the company's assistant director of industrial relations—a woman, who is in charge of the whole program for employing women—tours the plant at intervals, acting as counselor to the women employees, to hear any complaints they have and to advise them on their work activities. On these trips her arrival time is made known in advance to the women employees. She then transmits to plant managers, either with or without identification as the case may warrant, any situation that requires plant-management attention, with a copy of her report going simultaneously to the head of industrial relations for the company. Her report on her next trip to the plant will indicate whether her recommendations have been acted on. In selecting women for the position of assistant personnel manager, the policy is to avoid the dean-of-women, housemother, or chaperone type.

In one aircraft plant the assistance given by woman counselors to new women employees includes loans (granted after investigation) for lodging, food, and transportation until receipt of the first pay check.

In some plants counselors have given the shopping problem their immediate attention, as women employees reported this a reason for absenteeism. In one instance they called on grocery stores in nearby towns, where most of the women workers lived, as a result of which the stores take turns staying open evenings. In more than one instance a shopping service has been set up in an establishment on the outskirts of a city, so that merchandise orders based on daily news advertisements can be left and filled; packages are delivered to this office, where the women pick them up. In at least one case a shoe-repair service operates in the same building.

SIXTH—Select women carefully and for specific jobs.

Determine what requirements the job makes of the employee.

What is demanded in terms of height, long reach, strength, steady nerves? Does it call for alertness, judgment, manipulative ability, speed? Is it a noisy, dirty job and is the worker exposed to all conditions of weather?

One aircraft plant gets out a daily requisition sheet stipulating the physical requirements of the job, which is used by the intake interviewer. The employment office of the plant issues this sheet, showing departments and occupations where new workers are needed (indicating numbers required, priority rating of jobs, and shifts on which shortage is reported), with the general classifications under which all applicants are to be coded, as follows:

Worker is capable of—

A. Heavy sustained labor.
B. Moderately heavy labor.
C. Light labor.
D. Very light labor.

There are modifying codes qualifying the foregoing. These follow:

Condition of worker:

1. Has monocular vision or severe visual defect.
2. Has severe defect of hearing.
3. Should have partial sitting.
4. Is capable of sitting job only.
5. Has poor coordination.
6. Has nervous instability.
7. Has sensitive skin.
8. Has one arm.
9. Has hernia.
10. Has tendency toward developing hernia.
11. Has history of back strain or injury.
12. Has chronic illness (cardiac lesions, nephritis).
13. Has apraxic characteristics (senile).
14. Has arrested TB, asthma, chronic bronchitis.
15. Unsuitable for climbing, working around dangerous machinery (by reason of age, weight, or other—diabetes, epilepsy, hypertension, or leg defects).

No woman is given the "A" rating, because of the heavy manual work required under this classification. Ratings are assigned by the intake interviewer. The physical examination itself is not given the applicants until after they are hired—and the plant physician reports surprising accuracy by the interviewer in classifying them.

Applicant should be given a preemployment physical examination.

From this can be determined (1) physical condition of applicant, (2) fitness for work, and (3) types of work on which applicant can be placed. Plant doctors give an examination that usually includes blood and urine tests, skin examination, sometimes X-ray of the chest, and whatever additional tests are called for to meet various job requirements and protect the woman worker. It should be sufficiently thorough to discover physical defects, such as bad pelvic condition or varicose veins, that make some types of job hazardous. A few jobs are more hazardous to women than to men, especially where certain chemicals are used. The medical history of the applicant should be on record.

For crane operators in a navy yard, special eye and ear tests are given to women, with emphasis on depth perception, a neurological examination, and blood pressure.

A shipyard that has a rigid preemployment examination, including the Wassermann test, sends positive cases to the State health clinic, and a strict check on visits to the clinic is kept by the head of the company's hospital. In a navy yard, if the Wassermann test is positive, the applicant has the choice of going to a private physician or to a clinic for treatment.

A steel mill has a strict medical examination for applicants, checking eyes, ears, heart, lungs, blood test, and for hernia and other diseases or effects of diseases. Another steel company reports a similar rigid preemployment examination which, when combined with the study made of all jobs as to fatigue, and weight to be handled, enables the company to select the proper person for the job. "A person thoroughly able on one job might soon give out on another job."

In an aircraft engine-parts factory, the preemployment examination is a general physical with special emphasis on eyesight, since so much of the work is close inspection that requires good vision.

A rubber-products plant examines eyes, takes Wassermann, checks heart and lungs, and records medical history. There is a follow-up of all persons who appear anemic.

Manual dexterity and intelligence tests may be given applicants, but they are used only as an aid to personnel selection. High-scoring women should be placed on work that will use their mental abilities and so not bore them.

Industries long employing women, such as electrical-products manufacturing, have used aptitude tests for a number of years. Among the new war industries, many aircraft companies are using such tests in selecting women workers, employing experts in the field, and unusually successful placement has resulted.

A shipyard gives a mathematics test to determine ability to add, subtract, multiply, etc. An aptitude test consisting of 53 questions also is given. The average grade (at time of report) was 65, but if a woman makes over 50 she is considered capable of assimilating facts and of analyzing, and is given 3 days' further indoctrination in shop crafts.

In another shipyard, IQ and mechanical tests were said to be very helpful, the latter being used only as indication of manual ability. The company reports high correlation between test results and successful placement.

A machine-gun plant gives applicants tests for intelligence, aptitude, and personality. The company is satisfied with the practice and continues them; at present they are used to sift out the misfits. "Both those who do very well and those who do very badly are queer and need careful placing."

A series of tests for classifying new workers is given by a steel mill; over 1,250 women have been given the series. Scoring is by a definite scale of values, so bias of the checker is eliminated.

A shell-loading plant for 40-mm. shells gives a dexterity test after the applicant is interviewed and the women with the highest rating are sent to the fuze area, where there are many small hand jobs such as assembling detonators.

Family responsibilities of women should be taken into consideration.

The interviewer should know what home duties the woman has, and if possible place her on the most appropriate shift. Employment of mothers of children under 14 is strongly opposed by authorities. If they must work, their placement on the day shift is recommended. Mothers should be questioned closely as to whether adequate provision for the care of young children has been made. Harassed mothers make poor workers.

A large chemical company, in making plans to hire women in its various plants throughout the country, reported that its first women employees, if married, are those without small children; if women with small children are hired, the personnel department makes sure that the children are adequately and consistently cared for while the mother is away. It also tries to keep mothers on the day shift only, if at all possible. Plants that hire women with children find it difficult to avoid high absenteeism "because the women, and rightfully so, regard their responsibilities to their home or children as greater than their responsibilities to their employer."

In an ordnance plant employing thousands of women, the final hiring of a mother is not completed without checking with the various child-care agencies in the city to see that the children of this mother are actually enrolled or have been provided for in an approved manner.

The intake interviewer in a shipyard inquires how many children the woman applicant has, their ages, what care has been provided for them; the mother is given definite information on day-care programs for children available in that area.

SEVENTH—Develop a program for the induction and training of women.

A friendly introduction to the plant and its personnel will go far to ease the strain of adjustment to new environment, new work, and new associates.

Many women employees have never been inside a factory before, they may be frightened and disturbed by machines and noise, and the majority naturally will lack self-confidence.

A chemical company has in one of its plants a 6-day induction program for all women. They are told about the company's products. Talks are given on policies and procedures of the company—its employment terms (for the duration of the war only), secrecy about the job, insurance policies and opportunities, dismissal compensation, as well as wage-progression rates, hours of work, shifts, rest periods, reporting of injuries, safety rules, housekeeping. These talks alternate with tours through the buildings so that the women will learn about the plant and about their jobs, though actual work instruction is given on the job itself. The women are reassured about the attitude of their male coworkers, that the men will not resent them. The last two days are devoted to fire-drill instruction and a review of the week's program, with an individual check on memory of operations; the applicant is graded on her examination. The woman applicant is taken into the plant by the personnel representative and is shown the job for which she is being considered, to obviate the possibility that she will accept and then suddenly discover that she doesn't like the job or surroundings and check out. This procedure is said to reduce turn-over.

A shipyard has its newly employed women spend the first day learning company policy and procedure. They are given talks on safety and hygiene. Talks and films both are used and time is allowed for questions. Foremen have asked that this policy be adopted for men also, as they say that women start in to work better than the men.

Some of the major points that an induction program should include—carried out by those in charge of personnel, woman counseling, safety, training, and health—are as follows:

1. Explanation by personnel official as to company policies and procedures—such as hours of work, shifts, time clocks, how wages are paid, and so on.
2. Talks by woman counselor head to women workers on their attitudes and responsibilities in the factory as workers (for example, importance of regular attendance), relations with fellow workers, and an explanation of woman counselor's function. Personal hygiene should also be discussed.
3. Talks by plant doctor on health, and by safety official on safety habits and safety rules of the plant.
4. Films (on job processes; safety illustrations; good work habits; company's product).
5. Questions encouraged.
6. Plant tour, emphasizing importance of each job operation to the war product manufactured.
7. Women workers assigned lockers, shown first-aid room, rest room, and lunchroom, and told about uniforms if required.
8. Handbook distributed, containing information on plant policies and safety rules, and other useful information on women's health.
9. Women workers introduced to foremen by woman counselor.

Job training should be such as to assure that each woman becomes a safe and efficient worker.[1]

Wherever possible, both preemployment and preassignment training should relate to the job to be done.

New women workers resent being taught one type of work and then being assigned to another type in the shop.

Though school training may be excellent, it rests with the foreman to teach the specific job and working methods that will insure standards of quality and quantity.

As the majority of women are without knowledge of the subject, foremen should explain what has to be done, why it must be done, and how to do it.

One shipyard places workers with low test scores on simple jobs, but the others are given a 6-day course in nomenclature, tools, phraseology, and the requirements of future assignments. They are then assigned by groups to vestibule schools for an additional 2-weeks training. They operate power tools and familiarize themselves with the elementary fundamentals of shop operations. On completion of the 2-weeks vestibule training the women are assigned to shops for productive work.

A large paper mill, realizing that women who have never worked before start out under an emotional strain, believes that "just plain kindness" during the training period hastens the adjustment.

Job instructors in the plants operated by a chemical company explain the work to women slowly, point by point, and with considerable patience. They point out all hazards but they are careful to do it in such a way as not to arouse in the employee a feeling of overanxiousness or nervousness.

At one shell-loading plant, new employees are first shown films of all operations with accompanying lectures. Safety rules are given and discussed, and a tour is taken through the plant to observe actual operations. Trainees are then divided into groups according to job preference and again films are used on specific jobs with lecture and discussion on details. New employees are then placed with old employees, but they must work for a minimum of one week with inert materials before going on jobs involving explosives. Each new employee is closely supervised for from 3 to 5 weeks after employment.

One aircraft plant says that women get most out of a training period if it is conducted by an older woman, for the following reasons:

Women are less dismayed by criticism from another and older woman than they are if it comes from a man.

Women learn more readily and are less inclined to become discouraged when they can work with women who have already achieved skill in the same job operations.

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[1] A good deal of literature has been issued about training, and Government agencies in charge of specialized programs stand ready to offer assistance at all times: In the War Manpower Commission are the Training-Within-Industry Service offering job-instructorship training, job-relations training, and job-methods training, and the Apprenticeship Training Service; also the U. S. Office of Education, which supervises Nation-wide Vocational Training for War Production Workers, and Engineering-Science-Management War Training.

> The transition into factory life is less abrupt for the average woman if she is working with a group of women and under the direction of another woman.

The following paragraphs are taken from general instructions issued by the Office of the Assistant Secretary of the Navy:

> Get off to the right start in teaching the women. They are impressionable. The first few hours may establish their attitude toward their work. Be kindly, businesslike, and make them feel that the work they will do is important.
>
> Since the women are unfamiliar with terminology, encourage them to ask questions, and give them considerable drill on the names of machines, machine parts, and operations. Use visual instruction—diagrams, pictures, slides, films, actual models and demonstrations whenever possible.
>
> Plan to have patience in teaching women * * * They are sensitive to criticism of their work. * * * But experience has shown that women are anxious to do well, conscientious, and appreciative of assistance and instruction.
>
> Women like to know what they are doing and why. If it is not a military secret, give them broader explanations or reasons for their job. Relate it to things they understand.
>
> Women need more safety instruction than men because of their lack of familiarity with tools and machines. Relate such instruction to experiences they understand. Once they understand the regulations, they are more careful. Their safety records are higher than those of men.

EIGHTH—Establish good working conditions, effective in reducing turn-over, improving morale, and recruiting new women workers.

Working schedule.—The maximum 8-hour day and 48-hour week, with 1 day of rest in 7, has been advocated jointly by eight Government agencies, including the War and Navy Departments, as best for both men and women and conducive to the highest output when employees must work under pressure or over a long period. The 7-day workweek is injurious not only to health but to morale and to production. If the daily and weekly hours are too long, the rate of production tends to decrease and the quality of work to deteriorate. Rest periods of 10 to 15 minutes also should be provided, in the morning and afternoon. Chronic fatigue among women workers is reported to be increasing.

Seats.—Where possible, women should be provided with chairs, built on posture lines and adjustable to both the worker and the job. In many cases jobs could have been done seated but the employer gave no consideration to seats in planning the job set-up.

In an aircraft plant, management tries to see that women may sit properly at work on every job that can be done seated. A frequent practice is to have seats available even if women can sit only part of the time.

In a hosiery mill not all operations can be done seated, so chairs are placed about the plant for the occasional rest of employees who must stand at their work.

In a rubber-products plant, the use of chairs resulted in 16 girls doing as much work as 20 had done before.

In one establishment there was an increase of 2 to 13 percent in output when workers alternated standing and sitting.

Work clothing should be suitable. If jobs require safety clothing, wearing it should be compulsory.

If women are told on taking the job that a specific type of clothing must be worn, there should be no difficulty concerning clothing. If women have already been employed before clothing rules are established, committees of women workers should be appointed to work on this matter with safety experts.

Safety-clothing essentials are, first, safety; and second, convenience, wearability, comfort, cleanliness, suitability as to warmth. Safety clothing is not necessarily a uniform. The "dress" may be slacks and blouse, or coveralls. Caps are necessary around moving machinery. Safety shoes, goggles, gloves, also may be required for certain jobs. Safety clothing is designed to protect the worker from the hazards of the job or the environment, or from dusts and poisons in the materials used.

Specific styles of work clothing have been adopted in some plants after consulting employees through a woman's committee. A choice of colors may be permitted; on the other hand, there are plants where color indicates department. For convenience in obtaining the required uniforms, a salesroom should be arranged at the plant office.

In a large small-arms-ammunition plant where safety clothing is required only in certain areas, the company furnishes and launders the uniforms, which are changed daily. Safety shoes also are provided, the company paying part of the cost. [Some companies supply safety shoes free when special kinds are required.] Goggles and goatskin gloves are provided for all employees where the job requires them. Blue denim aprons are furnished and laundered for all women who will wear them, but some prefer their own kitchen aprons. The women do not like standard uniforms and the company is opposed to regimentation in the matter unless hazard is involved. New women employees are requested to wear slacks, but compliance is voluntary.

In another company, a standard uniform suit was chosen by the woman assistant director of industrial relations to be worn by all women in its various plants throughout the country "to meet the feminine psychology and physiology and at the same time be entirely practical from the standpoint of wearability and in accordance with requirements of safety engineers." Employment is conditioned on wearing the uniform, this policy being established before the first woman was hired. Many women work overhead, and there is much running up and down stairs and climbing ladders. The two-piece slack suit can be worn by women of broad or narrow hips; it has safety cuffs buttoned snugly around the ankles. The jacket has a form-fitted top with action-belted back, and a slightly flared peplum that comes below the hips, cutting off the broader aspects of the slacks. The jaunty cap has one peaked side with a place for the photo identification button to be worn as an ornament; it is worn with the hair out unless the job is around moving machinery, when the hair must be tucked in. The uniform is sold at cost to the employees.

NINTH—Supervise women workers intelligently.

Careful supervision, after the training period is over, to aid adjustment to job and to discover lack of understanding of operations, is good policy for any new worker.

Foremen and leadmen may need special training if they are not experienced in supervising women.

In a shipyard, after training in the vestibule school and assignment to job, the new employee remains under the jurisdiction of the training department for 30 days so that if not adapted to the work of the shop to which assigned, shifts may be made.

The following paragraphs are taken from general instructions on supervision of women, issued by the Office of the Assistant Secretary of the Navy:

> Proceed slowly for about the first two weeks. After they lose their fear of the machines, and after they become accustomed to the noise and vibration, they may be quicker than men in their work.
>
> Help women who have never worked in industry build confidence in themselves. Help them see that they can do the job successfully, that they need not feel "dumb."
>
> In your effort to be kind, don't do a woman's work for her or she will become bored. Help her to do it well by herself.
>
> A foreman should be tactful, wise, and understanding in his treatment of women workers. He should be able to soothe ruffled feelings as well as to administer first aid. Women are inquisitive and willing to learn. For a competent and tactful foreman, they will be loyal and conscientious.
>
> After the women are inducted properly, give them no special privileges other than those relating to physical limitations.

The Industrial Personnel Division of the Headquarters Army Service Forces emphasizes these major points on supervision in its "Guide to the Immediate and Maximum Utilization of Womanpower":

Good practices in the supervision of men employees can be used with success in supervising women.

Supervisors should take into consideration some important differences between men and women, as for example:

Women resent any evidence or appearance of favoritism.

Women require closer supervision when assigned to tasks involving unfamiliar mechanical equipment.

Special promptness in dealing with women's grievances is essential.

Follow-up in matters of health, safety, and personal adjustment should be carried on to detect any misunderstanding or nonobservance of rules.

Expansion of health services may be necessary.

Weekly talks on safety regulations, including safety clothing, and on personal hygiene and better health habits are the practice in many cases.

There should be medical supervision of women who are suffering from any physical disability such as varicose veins, and follow-up physical examinations for such workers to see if the job is proving harmful in the light of the specific disability, with recommendation for transfer to other work where necessary.

A suitable place should be provided where women can lie down for short periods. This policy is especially beneficial in reducing absenteeism at time of menstruation.

A program of physical conditioning of women through exercises may be necessary.

An aircraft factory considers that calisthenics are an essential part of conditioning a woman to meet the requirements of certain jobs. The program is intended to accustom muscles gradually to constant use on the job, as well as to build up general physical resistance to fatigue and colds. The woman is prepared to expect soreness and stiff muscles as a normal but temporary condition.

There should be set up a clear policy about work for pregnant women.

In an aircraft-engine plant, women are required to report to the medical department as soon as pregnancy is certain so that they may be placed on work that will protect them from any possible harm to themselves or the child. From reports obtained from each woman's own physician at regular intervals the company physician determines and requests job changes or shift changes as indicated. Facilities are available for check-ups by the company physician. When women are forced to stop work because of pregnancy their employment is terminated but if they wish to return to work every consideration will be given their application.

A navy yard has the following policies regarding women who become pregnant after their initial employment (women who are pregnant when they apply for work are not hired): Pregnant women are not to be employed on the graveyard shift and under normal circumstances will not be assigned to the swing shift. They shall not be given assignments that involve heavy lifting or other strenuous work that requires agility, endurance, continuous standing or sitting. They shall not be placed on work that calls for a good sense of bodily balance, such as on ladders, scaffolds, and so forth. They shall not be placed on work involving exposure to toxic substances considered to be extra hazardous during pregnancy (list of these is given), and other toxic substances that exert an injurious effect on the blood-forming organs, the liver, or the kidneys. They must submit a statement from their own doctor that continued employment will not adversely affect their health.

In a factory where a pregnant woman was to be discharged by her foreman, the industrial nurse took the matter to top management over the foreman's head presenting the Government's pamphlet issued by the Women's Bureau and the Children's Bureau on standards for maternity care and outlining a plan for the woman's continued employment in accordance with Government recommendations. The management was impressed with the justice of the case and agreed that the woman should be transferred to a job where she could sit.

TENTH—Give women equal opportunity with men.

When women make good on their jobs, they should be given a chance to be upgraded and an opportunity to transfer.

Training on the job and supplementary training should be followed by actual promotion when a woman has demonstrated her capacity for an advancement in both job and wages. Develop foreladies.

In an aircraft factory, a former saleswoman was given as her first assignment the job of operating a surface grinder. She quickly mastered her machine, and was soon given a more difficult job, building jigs. Again she made good, and as a result was allowed to try her hand at making dies, a job in which her accuracy and skill could be utilized fully.

An aircraft-engine plant gives all women doing monotonous work an opportunity to take the training for more complicated machines or more skilled inspection jobs. Requests for transfer are given careful consideration.

In a plant making small-arms ammunition, various tests are used for the upgrading of machine operators, and women have been trained to replace set-up men as need arises.

In a tubular-steel-products plant, a woman who started as an inspector in the tin-plate division was promoted eventually to forelady, and now, after 20 years, has become assistant to the industrial-relations manager. She has real authority, is consulted by department heads and foremen, and has charge of work for women in the operating departments and offices.

In a plant making brass casings for shells, there are 35 to 40 forewomen directly responsible for supervising the work of employees in their departments, and in the inspection department is a forewoman who has been with the company for a very long time, supervising both men and women. The vice president considers her one of his most able supervisors. She has taken many training courses at night, both vocational courses and courses for foremen. She knows th oughly the work that the employees in her department are requi to do, having worked on all the processes, and frequently she fills herself when a girl is absent or off the floor. She plans the work her department. When asked if men resented being supervised by woman, she stated that she has learned to handle that situation so a to avoid any resentment; she has a young man as an assistant through whom she gives all her directions to the men.

In a shipyard where the upgrading is left to the various shop foremen, a woman was given the leading man's job (he had been removed by the foreman), being placed in charge of the 22 women and men in one section of the lay-out department. In this same yard a woman was in charge of the light-riveting crew on the ship.

Equal opportunity with men means that wage rates throughout the plant should be based on a straight job analysis.

An aircraft factory reports a set rate for each job, with certain specifications for each. The question of sex is not considered. The job break-down follows the National Metal Trades Association list and there are various grades in each job specification.

A shipyard that has an equal-pay policy for men and women has made every effort to build up the confidence of its women workers through equal pay and by giving them a chance to use their best ability. The manager said, "It is poor psychology to pay women less than men, for it would at once make them feel inferior to men, and then they couldn't be expected to do so well."

The National Foremen's Institute says, "You can't induct a woman into war work and tell her she's going to fill the shoes of a man who has been called to arms, and then pay her only 80 percent of his wages, without stigmatizing her instantly with the idea that she really isn't so good as the man whose job she took over."

A steel mill reports that all jobs are studied and definite job rates set. An employee is paid the rate of the job. "The comptroller's office sends out men to police the plants and see that this policy is being carried out at all times." In another steel mill, men and women begin at the same rates as laborers, and as they are upgraded they are paid the same rates for the same jobs; women are upgraded to as many jobs as they can perform.

Encourage women to make suggestions.

Women's inventiveness and ingenuity may develop shortcuts.

Two women shipfitter trainees invented a device that cuts the time on their job by 60 percent—a stop gage that performs a cutting operation on a shearing machine in the plate shop; it is automatic and is more accurate.

A woman working in the sand-mill department of a steel foundry suggested an ingenious device that cut down the time involved in communicating test results—a clock-like device above the door of each testing room that enables the mill operator to see at a glance what the moisture content is, and so forth. Formerly, a tester would walk over to the mill each time and shout the results.

U. S. GOVERNMENT PRINTING OFFICE: 1944 O - 587138

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. Price 10 cents

SOUTH - ECONOMIC CONDITIONS (INCLUDING BIBLIOGRAPHIES)
1938-1942

Sent Mr Clark Forman
6003 [illegible] Interior Bldg.
Ext. 4171.

June 29, 1938

Memo to: Clark Forman

From: Mary Anderson

Subject: The Meaning to Southern Women of Low Wages and Unfavorable Conditions of Work.

In many parts of the South, labor legislation for women and the establishment of adequate working standards for them have not been well developed. This has had far-reaching effects on the health, the living standards, and the general welfare and happiness of women and their families.

Some explanation of this situation lies in the fact that the spread of our intricate industrial development has reached some of these sections rather later than was the case elsewhere in the country. This but emphasizes the importance of the prompt passage of such legislation to avoid some of the mistakes that earlier arose from its lack in other sections as they were becoming industrialized.

The South should be mindful of the fact that many employers move into this region to exploit the workers who are a part of the Southern people. This is especially true of the women, who are the most exploited of all those in the working population. The entire community bears the burden when large numbers of its members are kept at a low living standard.

EXCESSIVE HOURS OF LABOR AND FEW STATUTES FIXING MAXIMUM HOURS

The results of fatigue from excessive hours of labor in factories or fields, causing as it does ill health, poor quality of work, illness and generally unsatisfactory living, are too well known to need elaboration. These facts, long supported by medical testimony and scientific proofs, were again summarized late last year in the National Safety News as follows:

> "Resultant upon fatigue, the individual's ability to perform is lowered, his output decreased, the quality of his production diminished, his mental aptitude lowered, his susceptibility to disease increased in a direct ratio to the lowering of his vitality, his liability to commit errors is heightened, and, last but by no means least, his liability to sustain personal injury is greatly enhanced."

(2)

In most cases, ~~Repo~~ reports of State Labor departments have not [illegible] upon the hours of women's work. Recent industrial surveys made by the Women's Bureau of the U. S. Department of Labor have reported appreciable proportions of women working more than 50 hours a week in cotton and other textile mills, shoe, bag, paper box, (candy) drug, and other factories in certain Southern States. Still larger

Ky

In spite of the dangers of excessive hours of work, the safeguard of legislation limiting work hours has not been given women in the South to as great an extent as elsewhere in the country, though some Southern States have taken steps in this direction.

Ala
Fla
Ind
W.Va.

The South has two of only four States in the entire United States that have enacted no laws whatever to give women workers the benefits of legislation fixing maximum hours. Of 13 Southern States only one has established an 8-hour work-day for women in any industry, though one-~~third~~ fourth of all our States have taken such action for women in at least some occupations. Only three of the Southern States have applied to any industry a week as short as 48 hours, now recognized as the longest week consistent with adequate work and healthy life. (One Southern State has applied a 40-hour week to two important woman-employing industries.)

SC

NC
SC
Va

SC-textile & clothing

Many letters received in the Women's Bureau of the U. S. Department of Labor testify to the long hours Southern women are working in factories. For example, a girl in a Southern clothing factory writes:

> "We work 9 hrs. a day, 5½ days a week. The men work for $9 a week, the girls for $2.50 to $5 per week. I worked overtime two weeks ago which mounted up to 15½ hrs. [thus totalling 65½ hours] and the manager refuses to pay the money for overtime. We have on good authority that the owner of the factory has been forced out of several States for refusing to pay a decent living wage."

Another woman in a Southern hosiery mill writes:

> "They are working the girls 10 hours a day and some Departments are working 60 hrs. a week. (6 days a week) New girls that start in to learn the work they only pay them $5 per week. As soon as the NRA was overruled they cut wages and gave longer hours immediately."

Women who sit before trays of cracked nuts and pick out meats from the shells write that they "have to work 12 and 14 hours a day to get 50 cents."* Recent [illegible] [illegible] as little as 5¢ [illegible]

LOW WAGE LEVELS AND WOMEN'S ECONOMIC RESPONSIBILITIES

Where wage scales are low in general, many women need to seek employment to supplement the family income. That this occurs to a considerable extent in the South is indicated by the proportions of women at work and the information available as to their economic responsibilities. The need of women's work to add to the family exchequer also is shown by a comparison of wages actually received with estimates as to living costs.

Census

Of the States in this country in which over 30 percent of all women are employed, two out of three are in the South, as are five of the 11 States in which more than 25 percent of the woman population is in gainful work.

Ⓒ

Richmond

A recent analysis of the economic responsibilities of women in an important Southern city, made from census data by the Women's Bureau of the U. S. Department of Labor, shows that 12 percent of all the employed women in that city were the sole support of families of two or more persons. In that city more than 3,000 families were entirely supported by women, and in two-thirds of these one woman alone earned the entire family upkeep. 2nd ¶ Ⓒ

Okla brief p14

Our place says 10 cities another says 11

Va $786 yr
SC 634 yr
NC $14.51 wk 754 yr

Low wage levels for men oblige many women to contribute to the family support. Recent figures for 11 Southern cities, collected by the National Industrial Conference Board (organization of large manufacturing interests) indicate the average cost of living of a wage earner's family as $25.41 weekly, or approximately $1,321 in the year. Reports from the labor departments of three Southern States show the average wages of the manufacturing employee to be from 33 to 43 percent below this. Recent reports of wages in cotton manufacturing indicate that employees in this industry received considerably less than the amount required for their subsistence in the South. Their earnings in Southern States ran far below the lowest amounts received in any other part of the country.

BLS Study Apr 1937
Estimated weekly earnings of 40 hr week is below
NICB $25.41 cost living

3 State repts cited and cotton rept at
Compare figs WPA $17.37 and $903 in Okla brief p 15

The State reports for a number of industries, as well as the reports for cotton manufacturing, showed that the wage earner received on the average a wage well below that estimated by the Works Progress Administration as the lowest emergency cost for maintaining a manual worker's family.

Okla —
Ky, La, Va

Women's wages ordinarily are well below men's. However, only 1 of 13 Southern States has enacted a statute providing a minimum wage for women, though several others are attempting to pass this type of legislation. The need of such action is indicated by wage figures from the Women's Bureau of the U.S. Department of Labor. Recent pay-roll data prepared by this agency show women in cotton manufacturing in an important Southern textile State receiving average earnings 10 percent below women's average wages in this industry outside the South.

now Ky, La, Okla, 4

Use WB Sept 1937 figs for NC compare cotton wage with other States

(b)

S C Bul 111
median $8.10
Tex 1936 mimeo
(where median
but little over
$10)

Other figures from surveys made in certain Southern States by the same Bureau show that a week's wage of less than $10 was received by more than half the women reported in one State in cotton mills; more than half those in another State making or preparing candy, bags, children's clothing, and butter, eggs and poultry; and by large proportions of the women reported in three States in seamless hosiery plants and in two States in men's work clothes factories.

The whole community feels the effect of the low standards of living such wages make necessary. Many women workers, even though at work full time, must receive public aid because their wages are insufficient to care for themselves and their children. Thus the community carries part of the burden of these low wages.

(d)

Bul 135

One feature tending to lower women's wages is the system by which factories farm out industrial work to be done in homes. In Southern States women have been found at extremely low pay doing such work as making artificial flowers, sewing buttons on cards, clocking hosiery, embroidering children's clothing, stuffing and stitching baseballs. Always the pay is far below that in the factory. A study of industrial work on infants' wear found that the women reported had worked much longer hours than in the factory, though half of them had received less than $2.73 for this long week's work.

Texas
mimeo
on Bul 135

Bul 135
p19
p22

(d)
[illegible]

Many cases show the poor conditions under which such work must be done in homes. For example, in one home a woman who was ill sat on a pile of blankets hemming and sewing on lace. One girl sat on a bench, another on a wooden box with no back support, all bending over their sewing for long hours. When they must finish work after night they had to use candles as they had no other type of light. In another case fine work had to be kept in a locked room for fear of soiling it, and this left only the kitchen for the family to live in.

(a)

ADEQUACY OF WORKING CONDITIONS IN FACTORIES

There are many mills having very inadequate working conditions, and this situation scarcely can be improved without sufficient funds for fuller factory inspection. In one State, for example, the Women's Bureau of the U. S. Department of Labor found such cases as this in various textile and clothing factories:

Bul 147
pp 52-55

> No water, no soap, no towels.
>
> Washing facilities were a dirty sink on each floor. There were no chairs for girls on standing jobs and girls on sitting jobs had hard kitchen chairs.

Continue on next page

(a) Continued

> Only washing facility was a sink in a workroom with cold water. Windows were dirty and covered with lint.
>
> Natural light was insufficient and artificial light subjected the worker to a strong glare. Most of the workers' coats hung about on the walls.

On the other hand, there were many other plants where conditions were excellent. For example:

> A modern building with air conditioning. Lighting excellent; modern type of artificial lighting. Seats were adjustable chairs. Rubber mats were provided where there was danger of slipping.
>
> A modern plant in a good brick building. Housekeeping excellent. Service facilities were clean, reported as repainted several times a year.

end of (a)

LOW WAGES MEAN LOWERED LIVING AND HEALTH STANDARDS

A low wage scale, predicated on lower living costs, means in reality lower living standards, a less healthful condition of life, inadequate nourishment for many, greater susceptibility to disease, a higher incidence of illness. This is true where low wage scales prevail in the crowded industrial sections of many cities in all parts of the country, as well as in large areas in the South.

The Metropolitan Life Insurance Company reported in a recent year a rise of 7.3 percent in the death rate in the nine South Atlantic States, though in no other region had the death rise been above 4.8 percent and in some sections it had declined. The terrible scourge of pellagra that infests almost exclusively the Southern States is chiefly a disease of inadequate diet, responding to rather simple preventive measures of suitable nourishing food. In a recent study of money disbursements in 11 Southern cities, made by the Bureau of Labor Statistics of the U. S. Department of Labor, it was ascertained that from 60 to 88 percent of the families reported in the various cities were spending for food less than enough to purchase an adequate diet.

okla brief
p. 19.

Where wage levels are low there not only are many people who are not suitably nourished, which contributes a high sickness tendency, but there also is less adequate medical care. Both more disabling sickness and less frequent medical attention in low income groups have been reported by the President's Interdepartmental Committee to Coordinate Health and Welfare Activities.

More people in the Southern area than elsewhere die without medical aid as is indicated by reports of the Metropolitan Life Insurance Company which show that much larger proportions of the deaths in Southern States than elsewhere in the country are reported as of unknown or uncertain cause.

CONCLUSION

The low wage scales for both sexes, the many instances of excessive hours of work for women, the lack of adequate legal safeguards to women's work, of living following from low wages, the increased susceptibility to undernourishment and the diseases that follow, all these cannot but have a profound effect upon the lives of the women in the South, buthas individuals and in their family relationships.

SOUTHERN WOMEN WORKERS AND THE FEDERAL WAGE AND HOUR ACT OF 1938

More than two and one-half million women are in gainful work in 13 Southern States. This is more than one-fourth of the women so employed in the United States (26 per cent).	2,813,300
Somewhat more than a third of these women (35.5 per cent) are in occupations not subject to labor legislation, such as professional or administrative positions, or self employment, or public employment, in which case the workers may be otherwise provided for.	997,500
Nearly one-fifth of the Southern women in gainful work (19.6 per cent) come under the provisions of the new Federal wage and hour act, which fixes 25 cents an hour as the lowest wage that can be paid a worker employed in producing goods in interstate commerce.	551,000
There are at least 1/ 318,400 women in the South employed in occupations purely "intrastate" in character. The Federal act cannot guarantee to these women any minimum wage, not even one so low as 25 cents an hour, nor can it assure them reasonably short hours of work. These are women for whom, in any event, some provisions need to be made by the State itself. (This does not include women earning wages in agriculture or as domestic workers in homes.) These are the women working in retail trade, as laundry operatives, and in hotels, restaurants, beauty shops and the like. More than one-fourth of these women are in the 4 States having minimum wage provisions, Arkansas, Kentucky, Louisiana and Oklahoma. However, 231,000 of them have no wage guarantees in the law. The largest numbers of these are in Texas, Florida, Georgia and Tennessee, with considerable numbers in North Carolina, Virginia and Alabama, and many also are in Mississippi and South Carolina.	318,400

1/ Also there may be many others among those employed as untrained nurses, or in millinery or dressmaking shops (some 75,300).

Women wage-earners on the farm and those in domestic employment in homes have no guarantees whatever of living wages, either by State or Federal legislation, and no protection against work for excessive hours in the day or week. State hour laws do not cover these women at all, nor does State minimum wage legislation, nor does the Federal law. This includes practically 30 per cent of all women workers in the South.	870,300

The greatest needs of these Southern women workers are:

1. State minimum wage laws with as broad a coverage as possible.

2. State hour laws with as broad a coverage as possible.

3. Appropriation for the State labor departments, enabling such laws to be put into effect after passage, or strengthening their effectiveness where they already are in existence.

ESTIMATED COVERAGE OF WOMEN WAGE EARNERS IN 13 SOUTHERN STATES BY STATE AND FEDERAL WAGE-HOUR LAWS

	Number of women -					
	Total	Covered by Federal law	Could be covered by ~~Standard~~ State Minimum Wage Law (but not Federal law)	Not covered by State or Federal law (farm labor, domestic servants)	Not covered though some are employees (dressmakers, milliners, nurses not trained)	Law not applicable (self-employed, public employment, professional, etc.)
Total United States	10,752,116	3,915,000	1,663,000	2,171,000	341,000	2,659,000
Total 13 States	2,813,327	551,039	1/ 318,495	870,807	75,391	997,595
Per cent of total United States	26.2	14.1	19.2	40.1	22.1	37.5
Alabama	254,014	34,483	19,435	82,632	4,860	112,604
Arkansas	119,193	12,170	13,420	31,794	2,809	59,000
Florida	149,984	25,552	25,474	61,776	5,862	31,320
Georgia	311,939	61,928	25,201	122,716	8,532	93,562
Kentucky	146,678	40,786	22,768	37,048	5,640	40,436
Louisiana	191,420	28,859	23,219	72,540	6,609	60,193
Mississippi	231,728	12,489	13,249	55,411	3,128	147,451
North Carolina	272,965	83,123	20,621	72,923	5,460	90,838
Oklahoma	129,346	27,681	28,050	26,921	4,070	42,624
South Carolina	206,761	37,664	10,164	75,164	3,304	80,465
Tennessee	195,324	52,698	24,873	57,784	5,530	54,439
Texas	421,708	80,491	70,287	115,753	14,229	140,948
Virginia	182,267	53,115	21,734	58,345	5,358	43,715

1/ Of these women, 87,457, or 27.5 per cent are in States having a minimum wage law at present - Arkansas, Kentucky, Louisiana, and Oklahoma. 231,038 have no coverage yet.

	Year's wage	Week's wage
North Carolina	✓ $ 754	✓ $14.51
South Carolina	634	
Texas		13.10
Virginia	✓ 786	

✓ Next women — Compliment

Women's wages ordinarily are well below men's, as the figures show where States report such data by sex. (Cited in another section.) Recent state figures (March 1938), even though not reported by sex also show that the levels of wages in man-employing industries are considerably higher than those in the important woman employers:

Man Employing Industries		Women Employing Industries	
Arkansas			
Furniture	$14.86	Textile and garments	$ 9.59
Glass	24.47	Confectionery	17.37
Louisiana			
Crude petroleum	34.56	Manufacturing	18.88
Texas			
Flour and feed	18.25	Clothing	15.55
		Textiles	15.00

Low wage levels for men have obliged many women to contribute to the family support. Women's wages no longer can be considered solely on the basis of their own support, for very many women have dependents.

A recent analysis of the economic responsibilities of women in an important Southern city, made from census data by the Women's Bureau of the United States Department of Labor, shows that 11 per cent of all the employed women in that city were the sole support of families of two or more persons. In that city more than 3,000 families were entirely supported by women, and in two-thirds of these one woman alone earned the entire family upkeep.

15.55
.52
3110
7775
808.60

COMPARISONS OF MEN'S AND WOMEN'S WAGES

Women's wages ordinarily are well below men's, as the figures show where States report such data by sex. (Cited in another section.) Recent state figures (March 1938), even though not reported by sex also show that the levels of wages in man-employing industries are considerably higher than those in the important woman employers:

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Flour and feed	18.25	Clothing	15.55
		Textiles	15.00

Low wage levels for men have obliged many women to contribute to the family support. Women's wages no longer can be considered solely on the basis of their own support, for very many women have dependents.

A recent analysis of the economic responsibilities of women in an important Southern city, made from census data by the Women's Bureau of the United States Department of Labor, shows that 11 per cent of all the employed women in that city were the sole support of families of two or more persons. In that city more than 3,000 families were entirely supported by women, and in two-thirds of these one woman alone earned the entire family upkeep.

15.55
52
3110
7775
808.60

Tentative Program for
Sent Judge Charlton
N-14-1938
Mary Winslow
M. E. Pidgeon
Round Table on Women wage Earners,

WOMEN WAGE EARNERS IN THE SOUTH

> "Many women, even though employed full time, must receive public aid because their wages are insufficient to care for themselves and their children. In a region where workers generally are exploited, women are subjected to an even more intense form of exploitation."

What has been done to prevent the exploitation of women workers in the South?

How can this exploitation be stopped?

Chairman:	Mary N. Winslow, Washington, D. C.
Panel Members:	Molly Dowd, Birmingham, Alabama
	Elisabeth Christman, Washington, D. C.
	Raymond Pinchbeck, Richmond, Virginia (?)
	Mary Elizabeth Pidgeon, Virginia

U. S. DEPARTMENT OF LABOR
Women's Bureau
Washington

November 14, 1938

AIR MAIL

Judge Louise Charlton
212 Tutwiler Hotel
Birmingham, Alabama

My dear Judge Charlton:

Enclosed is our plan for the round table on Women Wage Earners in the South, which Miss Christman wired you we would send today.

We put in the name of Dr. Raymond Pinchbeck tentatively hoping that you can get either him or Dr. Frank Graham, or other man, according to Miss Christman's suggestions.

Sincerely yours,

Mary Elizabeth Pidgeon, Director
Division of Research

Enclosure

CC: Miss Molly Dowd
212 Tutwiler Hotel
Birmingham, Alahama

MEP:ld

WOMEN WAGE EARNERS IN THE SOUTH

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Raymond Pinchbeck, Richmond, Virginia
Mary Elizabeth Pidgeon, Virginia

Saturday

Elisabeth Christman dictated over the telephone 11/12/38 the following information from a letter she received from Judge Charlton (it seems Mollie Dowd was sent somewhere by the Governor, and so Judge Charlton answered E.C.'s letter instead of MD answering it herself)

I want to tell you how we are setting up the other committees; on the whole we are introducing them first with a quotation brief and to the point of the most important aspect of that particular subject, which quotation we cull from the Economic Report. That is followed by one or more leading questions, which will be printed in the program as a guide for the discussions. Then follows the name of the chairman, of the leader, and the principal speakers. We have decided not to put in the topic for each one's address as it might result in a great deal of duplication of the thoughts and conclusions on the part of the speakers. In other words, if Mr. A covers a very essential part of a program, then Mr. B, following him, could omit from his talk the same subject matter already covered by Mr. A. However the speakers are informed in advance as to what their depiction of the subject should be in general. I would suggest for the Women In Industry section that the leading question could be "How should legal safeguards for southern women and children in industry be improved" This could be followed by your speakers taking up maximun hours for women, both hours per day and per week; Restrictions on night work as affecting hours for women; Age for children; Working standards, minimum wages, maximum wages, the abolition of home work (go to town on the candlewick stuff, Elisabeth); or the application of wages and hours law to women.

I hope this answers your questions. If you will make a rough outline of what you want to consider we will have time to get it to the printer.

- - - - -

OUTLINE WITH SPEAKERS MUST GO MONDAY AIRMAIL

Nothing further can be expected to come from them. Hence no further information on time allowed for the committee, as to how many members are on other committees, etc. - although E.C. carefully asked pointed questions along these lines.

E.C. will get in touch with Miss Winslow and tell her to call M.E.P. on Monday

WOMEN'S BUREAU
U.S. Department of Labor
Washington

February 12, 1942

MATERIAL ON WORKERS' EDUCATION IN THE SOUTH

Books and Reports

Reports of Annual Conference of Teachers in Workers' Education. Edited by a Committee of Local 189, American Federation of Teachers. Katonah, New York. 1924-1931. 1/
"Southern Summer School for Women Workers in Industry." Fifth Annual Conference. 1928.
"The Problem of the South." Seventh Annual Conference. 1930.

Smith, Hilda W. "Schools for Women Workers in Industry." Handbook of Adult Education in the United States, 1934. New York, American Association for Adult Education, 1934, pp, 306-8.

Southern Summer School for Workers. 437 West 59th Street, New York, N. Y. (Executive office).
Annual Report. Mimeographed.

U. S. Federal Emergency Relief Administration. Office of the Specialist in Workers' Education.
Report of Teachers' Training Centers in Workers' Education, Summer, 1934.
By Ernestine L. Friedman. Washington, 1935. 23pp. Mimeographed. 2/

U. S. Works Progress Administration. Division of Emergency Education.
Workers' Education under the FERA, 1934-35. 2/

Pamphlets

Affiliated Schools for Workers, Inc. Education That Changes Lives. The Story of Five Schools for Workers. New York. (1934.) 3/

Starr, Mark. Workers' Education Today. New York. League for Industrial Democracy, 1941. 48 pp. 15¢.

______________. Workers' Education in Overalls. New York, International Ladies' Garment Workers' Union. Educational Department, 1939. Reprinted from Labor Record (Philadelphia). 7 pp.

1/ Inquire of the American Labor Education Service, 437 West 59th Street, New York, which handles publication of current reports.

2/ Inquire of the Office of the Specialist in Workers' Education, Works Progress Administration, 1734 New York Avenue, Washington, D. C. regarding these publications.

3/ Inquire of American Labor Education Service regarding this publication.

Periodicals

Brunson, H. L. "Workers' Education in the South." *Workers Education*. 4/ Vol.2, No. 1, pp.18-20. May, 1924.

Coit, Eleanor G. and Starr, Mark. "Workers' Education in the United States." *Monthly Labor Review*. July, 1939. (Reprinted as Serial No.962)

Leonard, Louise. "A New Summer School for Women Workers." *Workers Education,* 4/ Vol.5, No.3, pp.9-12. December, 1927. Also in *American Federationist*, Vol.34, pp.1487-90. December 1927.

______________. "The South Begins Workers' Education." *Workers Education,* 4/ Vol.6, No. 2, pp.1-6. November, 1928. Also in *American Federationist,* Vol.35, pp.1381-5. November 1928.

MacDonald, L. "New School in the Old South." *Survey,* Vol.59, pp.96-7. October, 1927.

Monthly Labor Review. "Recent Developments in Workers' Education in Various States." Vol.40, No. 4, pp.948-53. April, 1935.

Workers Education. 4/ "Eight Years of Southern 'Progress.'" October-November, 1929.

U. S. Federal Emergency Relief Administration, Emergency Education Projects. *Concerning Workers' Education*. 2/ Monthly Bulletin published from April 1934 to December-January 1934-5. (Contains current material on Workers' Education in the South.)

4/ Inquire of the Workers' Education Bureau of America, 1440 Broadway, New York, N. Y., regarding this periodical.

Women's Bureau Bulletins

Causes of Absence for Men and Women in Four Cotton Mills, No. 69, 1929
The Effects on Women of Changing Conditions in the Cigar and Cigarette Industries, No. 100, 1932
Hours, Earnings and Employment in Cotton Mills. No. 111, 1933
Variations in Wage Rates Under Corresponding Conditions. No. 122, 1935
Employment in Hotels and Restaurants. No. 123, 1936
Hours and Earnings in Tobacco Stemmeries. No. 127, 1934.
Potential Earning Power of Southern Mountaineer Handicraft. No. 128, 1935
Factors Affecting Wages in Power Laundries. No. 143, 1936.
Differences in the Earnings of Men and Women, No. 152, 1938.
Women in Industry Studies:
  Arkansas, No. 124, 1935
  Texas, No. 126, 1935
  Tennessee, No. 149, 1937
  West Virginia, No. 150, 1937
  Kentucky, No. 162, 1938
  Texas (mimeographed),1936

PERIODICALS

Change Southern Textile Bulletin to

The Textile Bulletin - Semi-Monthly. $1.50. David Clark, Editor
Clark Publishing Company, 218 West Morehead Street, Charlotte, N. C.

Add

The Southern Economic Journal. Quarterly. $3.00. Harlan L. McCracken and Albert S. Keister, Editors.
The Southern Economic Association and the University of North Carolina, Chapel Hill, North Carolina

The Southwestern Social Science Quarterly. Quarterly. $3.00.
J. J. Rhyne, Editor-in-Chief, The Southwestern Social Science Association, Norman, Oklahoma

The Coming of Industry to the South - The Annals of the American Academy of Political and Social Science, January 1931. Contains (among others):

- Growth of Manufactures in the South - Broadus Mitchell
- Southern Textile Manufacturing - Claudius T. Murchison
- Tobacco Manufacturing in the South - Charles E. Landon
- Industrial Development in Virginia - Robert H. Tucker
- Industrial Development in North Carolina - C. K. Brown
- The Industrial Development of Tennessee - Frank Bird Ward
- Industrial Alabama - Lee Bidgood
- Southern Labor Supply and Working Conditions in Industry - Mercer G. Evans
- Women and Children in Southern Industry - Elizabeth L. Atey
- Organization of Labor in the South - George Sinclair Mitchell

The Collapse of Cotton Tenancy - Charles S. Johnson, Edwin R. Embree, and W. W. Alexander, University of North Carolina Press, Chapel Hill, 1935.

Income and Wages in the South - Clarence Heer, University of North Carolina Press, Chapel Hill, 1930.

King Cotton is Sick - Claudius R. Murchison, University of North Carolina Press, Chapel Hill, 1930

Labor in the Industrial South - Abraham Burglund, George T. Starnes and Frank T. de Vyrer, University of Virginia, 1930

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

THE PRESIDENT'S MESSAGE TO THE CONFERENCE

THE PRESIDENT WROTE:

"No purpose is closer to my heart at this moment than that which caused me to call you to Washington. That purpose is to obtain a statement--or, perhaps, I should say a restatement as of today--of the economic conditions of the South, a picture of the South in relation to the rest of the country, in order that we may do something about it: in order that we may not only carry forward the work that has been begun toward the rehabilitation of the South, but that the program of such work may be expanded in the directions that this new presentation shall indicate.

"My intimate interest in all that concerns the South is, I believe, known to all of you, but this interest is far more than a sentimental attachment born of a considerable residence in your section and of close personal friendship for so many of your people. It proceeds even more from my feeling of responsibility toward the whole nation. It is my conviction that the South presents right now the nation's No. 1 economic problem--the nation's problem, not merely the South's. For we have an economic unbalance in the nation as a whole, due to this very condition of the South.

"It is an unbalance that can and must be righted, for the sake of the South and of the nation.

"Without going into the long history of how this situation came to be--the long and ironic history of the despoiling of this truly American section of the country's population--suffice it for the immediate purpose to get a clear perspective of the task that is presented to us. That task embraces the wasted or neglected resources of land and water, the abuses suffered by the soil, the need for cheap fertilizer and cheap power; the problems presented by the population itself--a population still holding the great heritages of King's Mountain and Shiloh--the problems presented by the South's capital resources and the absentee ownership of those resources, and problems growing out of the new industrial era and, again, of absentee ownership of the new industries. There is the problem of labor and employment in the South and the related problem of protecting women and children in this field. There is the problem of farm ownership, of which farm tenantry is a part, and of farm income. There are questions of taxation, of education, of housing and of health.

"More and more definitely in recent years those in the South who have sought selflessly to evaluate the elements constituting the general problem, have come to agree on certain basic factors. I have asked Mr. Mellett to present for your consideration a statement of these factors as prepared by various departments of the government. I ask you to consider this statement critically, in the light of your own general or specific knowledge, in order that it may be made representative of the South's own best thought and that it may be presented to Congress and the public as such.

"I had hoped to attend your meeting and listen to your discussions. Unhappily, other pressing work makes this impossible. Please accept my sincere regret that I cannot be with you and be assured that I anticipate with deep interest the result of your labors."

SOUTHERN ADVISORY COMMITTEE

Names of those attending meeting on July 5th.

ab. entirely
Major Thomas Allen,
Memphis Water and Light Division,
Memphis, Tennessee.

Dr. B. F. Ashe, President,
X University of Miami,
Miami, Florida.

out
Governor Carl Bailey,
Little Rock, Arkansas.

W. B. Bizzell, President,
State University,
Norman, Oklahoma.

L. O. Crosby, lumberman,
Picayune, Mississippi.

Judge Blanton Fortson,
Judge, County Court,
Athens, Georgia.

Frank Graham, President,
University of North Carolina,
Chapel Hill, North Carolina.

Attorney James Hammond,
Past President,
Chamber of Commerce,
Columbia, South Carolina.

ab.
Gerald W. Johnson,
Journalist,
Evening Sun,
Baltimore, Maryland.

Gen. John C. Persons,
President,
First National Bank,
Birmingham, Alabama.

ab.
Prof. Chas. W. Pipkin,
Louisiana State University,
Baton Rouge, Louisiana.

out
J. H. Reynolds, President,
Hendricks College,
Conway, Arkansas.

S. L. Smith,
Peabody College,
Nashville, Tennessee.

Robert J. Smith,
Vice-President,
Aviation Company,
Dallas, Texas.

Alexander Speer,
Former President,
Virginia Public Service Co.,
Alexandria, Virginia.

Joseph G. Tillman,
Statesboro, Georgia.

J. Skottowe Wannamaker,
President,
American Cotton Association,
St. Matthews, South Carolina.

Carl White, Printer & Editor,
A.F. of L. Labor Leader,
Port Arthur, Texas.

Miss Lucy Mason,
State Representative C.I.O.,
Atlanta, Georgia.

Col. Leroy Hodges, Comptroller,
Commonwealth of Virginia,
Richmond, Virginia.

Mr. Barry Bingham, Publisher,
Louisville Courier Journal,
Louisville, Kentucky.

out
Col. P. H. Callahan, President,
Louisville Paint & Varnish Co.,
Louisville, Kentucky.

Mr. Paul Poynter,
St. Petersburg Times,
St. Petersburg, Florida.

ab.
Judge Fred M. Vinson,
U. S. District Court, D.C.

H. L. Mitchell, Sec'y.-Treas.,
Southern Tenant Farmers Union,
Memphis, Tennessee.

Appleby
Jas W (Johnson?)

Mr. Jas.? McGuire (Dept Justice)
Mr. Goldsmith
Mrs. Clark Foreman
Mr. Mallette

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

SECTIONS OF REPORT

1. Economic Resources
2. Soil
3. Water
4. Population
5. Taxable Wealth
6. Education
7. Health
8. Housing
9. Unemployment and Relief
10. Labor
11. Labor of Women and Children
12. Use of Land
13. Farm Income
14. Credit
15. Use of Natural Resources
16. Ownership of Industry
17. New Industries

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 1

ECONOMIC RESOURCES

In the South, as elsewhere, the two most important economic endowments are its people and its physical resources. A larger percentage of the population of the South derives from early American stock than that of any other region in the United States. 97.8 percent, according to the last census, was native born; 71 percent white, and 29 colored. The birth rate of people in the South exceeds that of any other region and, in fact, the South may be considered the most fertile domestic source for replenishing the population of the United States. At a time when the population of the country as a whole is becoming stationary, there is a continuous supply of people leaving the South to work in other parts of the country.

With respect to its physical resources the South has been richly endowed. No other region of the country offers such diversity of climate, soil and topography. With a climate ranging from temperate to subtropical, the South has more than two-thirds of that part of the nation where there is a frostless growing season for more than six months of the year. Throughout almost the entire area there is ample annual rainfall. Artificial irrigation is rare.

Excess of birth over deaths is 30 pc in South. Less than 1/3 Pop. of country but more than 1/2 of the excess of births over deaths. In Va. definite downward birthrate trend in past 10 yrs.

However much they may have been abused the soils of the South are the most widely varied of the nation. Alabama, a typical Southern state, alone has seven major types and almost three hundred soil subtypes. These magnificent soils permit the raising of a wide variety of products: cotton, tobacco, grains, fruits, vegetables, potatoes, hay, peanuts, sugar cane, and hemp. The South is the world leader in production of cotton and tobacco.

The South's soil and climate combine to give it forests of many kinds, for in this region are found three of the country's six major forest belts;

viz, the Appalachian, southern pine, and the major part of the central hardwood belt. These belts contain forty percent of the nation's forests, where forty-four percent of the cord wood and a third of the country's lumber is produced. The southern region leads the world in naval stores production. Because of the manner in which the southern pine reseeds itself and the rapidity with which it grows the region has great potentialities for the production of paper.

With all of its lands and grasses, however, the South has a deficiency in the production of animals and animal products. Its twenty million cattle are less than a third of the total found on American farms.

Birds, fish, and game are as plentiful as in any part of the country. Louisiana is the largest raw-fur producer of the country.

The South's store of minerals includes more than 300: Asbestos, asphalt, barite, bauxite, clays, coal, feldspar, fluorspar, gypsum, lead, limestone, marble, mercury, phosphate rock, pyrites, salt, sand and gravel, silica, sulphur, zinc, and so on by the scores.

With less than two percent of its seams so far tapped, the Southeast contains a fifth of the nation's soft coal. In 1930 it mined a full tenth of our iron ore and produced nearly a tenth of our pig iron. Of the nation's crude oil, nearly half is in the Southwest, and the major portion of the world's production of commercially used natural gas comes from the Texas-Oklahoma fields. In 1929 the Southeast furnished 61 percent of the total marble production of the nation. Most of the world's soapstone comes from Virginia. Florida and Tennessee have produced 98 percent of all our phosphate, and Texas and Louisiana 99.9 percent of our sulphur.

The South has widely varying topographic conditions - vast prairies, wooded plains, intermediate lands, valleys and the highest mountains in the eastern part of the country. Great rivers offer opportunity for inland water transportation and for vast power production.

Bordered by both the Atlantic and the Gulf, the South has ideal harbors and many fine ports. Trade with Europe has been important for three centuries. Across the Gulf and Caribbean the South can expect further trade development.

Commercial fisheries flourish on both the Atlantic and Gulf coasts. Shore fisheries engaged in taking menhaden, oysters, clams, mackeral, sponges, and shrimp are especially important.

In transportation, the South is for the most part well served. It is covered by rail lines which connect the interior with ports and give easy access to other regions. Both the Mississippi and the Ohio Rivers' navigation facilities serve the South. The Warrior - Tombigbee system taps the important industrial region around Birmingham, while the Tennessee river system, now being developed by the Tennessee Valley Authority, will make available to the very heart of the Southeast the benefits of inland water transportation. The highways of the South are well advanced. Roads are relatively easy and inexpensive to build. The region's climatic conditions are such that there is no arresting of motor traffic in winter months. The South is well served by airlines.

With this wealth of population and natural resources, however, the South is poor in the machinery for converting its potentialities into riches. With 28 percent of the nation's people it has only 16 percent of the tools by which people make their living. With over half the country's farmers, the South has less than a fifth of the nation's farm implements. Despite its coal, oil, gas and water power, the region uses only 15 percent of the nation's factory horse-power, Its potentialities have been neglected and its opportunities unrealized.

Suppressed
Squandered
dissipated

The paradox of our nation is that the South, which is one of our wealthiest sections, is at the same time the poorest. It is wealthy in natural resources and advantages and poor in ownership and control of the money and credit resources necessary for their development and exchange. As a result it must sit by and watch its plenty enjoyed by other sections not so abundantly blessed by nature but in control of the man-made machinery of finance. It is the victim of a fiction - that money and credit, the machinery created for the more effective distribution of wealth, is wealth itself - a fiction which by general acceptance has become more powerful than truth and has forced the South to dissipate its capital in order to exist; to deliver its material resources into the hands of others without consideration except an inadequate wage for the labor of removing them from the ground.

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 2

SOIL

Nature gave the South good soil. With less than a third of the nation's area, the South contains well over a third of the nation's good farming acreage. It has two-thirds of all the land in America receiving a 40-inch annual rainfall or better. It has nearly half of the land on which crops can grow for six months without danger of frost.

This heritage has been squandered. Sixty-one percent of all the nation's land badly damaged by erosion is in the southern states. An expanse of southern farm land as large as the state of South Carolina has been gullied and washed away - at least 22 million acres of once-fertile soil have been ruined beyond repair. Another area the size of Oklahoma and Alabama combined has been seriously damaged by erosion. In addition, the sterile sand and gravel scoured off this land has covered over a valley acreage equal in size to the State of Maryland.

There are a number of reasons for this wastage:

Much of the South's land originally was so fertile that it would produce crops for many years, no matter how carelessly it was farmed. For generations thousands of southern farmers have plowed their furrows up and down the slopes, so that each furrow served as a little ditch to hasten the run-off of silt-laden water after every rain. Even today comparatively few southern farmers terrace their land or plow it on the contours.

Overstated
Say
[illegible]
[illegible]

Half of the South's farmers are tenants, who move every year or two. They have little interest in preserving soil they do not own.

The South's chief crops are cotton, tobacco, and corn. All of these are inter-tilled crops - the soil is plowed between the rows, so that it is left loose and bare of vegetation. Under such conditions, the top-soil washes away much more swiftly than it would from land planted to cover crops, such as clover, soy-beans and small grains. Moreover, cotton, tobacco, and corn leave few stalks and leaves to be plowed under in the fall; and as a result the soil constantly loses its humus, and its capacity to absorb rainfall.

Even after harvest, southern land is seldom planted to cover crops which would protect it from the winter rains. This lack of rotation and cover increases erosion about ten-fold.

Southern farms as a rule are the smallest in the nation. One-fourth of them are smaller than 20 acres. A farmer with such little land is forced to plant every foot of it in cash crops; he cannot spare an acre for rotation plantings or pasture. Under the customary tenancy system, moreover, he has every incentive to plant all his land to crops which will bring in the largest possible immediate cash return. Ordinarily the landlord encourages him in this destructive practice of cash-cropping.

Training in better agricultural methods, such as terracing, contour-plowing, and rotation, is hard for many southern farmers to get. Annually the South spends eight times as much for fertilizer as for agricultural training through its land-grant colleges, experiment stations, and extension workers.

Forests are one of the best protections against erosion. Their foliage breaks the force of the rain; their roots bind the soil so it cannot wash away; their fallen leaves form a blanket of vegetable cover which soaks up the water and checks run-off.

Ala. over 60 pc of the land is forest

Yet the South has slashed away a large part of its forest, leaving naked acres of gullied, useless soil. There has been comparatively little effort at systematic reforestation. The National Resources Committee has recommended, as a soil-saving measure, the reforestation of 22 million acres of abandoned crop and pasture land. Most of this acreage is in the South and East, and was originally covered with timber.

There is a close relationship between erosion and floods, which recently have been causing a loss to the nation estimated at about $35,000,000 annually. Rainfall runs off land subject to erosion much more rapidly than it does from land planted to cover crops or forest. Recent studies indicate that a single acre of typical corn land lost approximately 127,000 more gallons of rainfall in a single year than a similar field planted to grass. A similar experiment near Tyler, Texas, showed that land sodded in grass lost less than one percent of a heavy rain through immediate run-off, while nearby land planted to cotton lost 31 percent. In short, unprotected land not only is in danger of destruction; it also adds materially to the destructive power of the swollen streams into which it drains.

These evils - each one re-enforcing all the others - are causing an unparalleled wastage of the South's most valuable asset, its soil. They are steadily cutting down its agricultural income, and steadily adding to its cost of production as compared with other areas of the world which raise the same crops.

For example, it takes lots of fertilizer to make worn-out eroded land produce. The South, with only one-fifth of the nation's income, pays three-fifths of the nation's fertilizer bill. In 1929 it bought $5\frac{1}{2}$ million tons of commercial fertilizer at a cost of $161,000,000. And fertilizer does not restore the soil. For a year or two it may nourish a crop, but the land still produces meagerly and at high cost.

Moreover, southern farmers cannot pile on fertilizer fast enough to put back the essential minerals which are washing out of their land. Each year about 27,500,000 tons of potash, nitrogen, and phosphorus compounds are leached out of southern soil and sent down the rivers to the sea.

Today the South is losing more than $300,000,000 worth of fertile top-soil through erosion every year. This is not merely a loss of income - it is a loss of irreplaceable capital.

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 3

WATER

Until recent years the South has developed few communities so large as to draw heavily on the generally abundant water resources and to impair their quantity or their quality. Now, however, new problems have been introduced by the increasing industrialization on which the economic advancement of the region depends. Hydroelectric power production is well advanced, but a greater amount of potential water power awaits future development. Large areas of fertile land could be reclaimed by drainage and clearing, but those lands which now are drained are developed incompletely. The fisheries are impaired by over-fishing and water pollution, and the wildlife and recreation facilities have been developed only meagerly.

With the exception of the seaports or older river ports, the larger Southern cities and the newer industrial towns have developed in the Piedmont plateau or upland regions, where groundwaters are not abundant, and where large supplies must be sought from surface streams. Many such communities are in headwaters areas from which the stream flow during the summer is small. Pollution of these streams by domestic and industrial wastes impairs public health, increases the difficulty of obtaining water supplies, and limits the recreational use of streams.

Groundwaters are the source of rural water supplies in most areas of the South, and generally are obtainable in satisfactory quality from shallow wells. Throughout the coastal plain, the alluvial valley, and the states west of the Mississippi, deep wells tap water of good quality, often under artesian pressure, and in quantity ample for small communities. Such sources have in a number of instances been depleted by overdrafts and by waste, and the storage of surface waters has been necessary. Many small and medium-sized communities lack adequate and palatable water supplies, and do not have suitable waste disposal facilities.

The combination of the high rainfall and relatively large stream flow of the southern Appalachian Mountains, with favorable topography and foundation conditions for dams has made possible very large economical developments of water power in the foothills. Total installations in the region exceed four million horsepower, and have kept pace with the demand for industrial power. These developments and their interconnected transmission lines supply about 75% of the power produced for public use in their area; this is about double the proportion which hydro-electric public power bears to total public power produced in the United States as a whole. More than six million horsepower of potential water power remain undeveloped. These future power reserves constitute a great economic asset and a sound regional plan will provide for their full utilization as the markets of the region develop.

1934

Wannamaker says much developed in SC since 1934

In the Mississippi Valley, along the Gulf Coast and along much of the South Atlantic Coast, the settlement and original development of the country was based upon water transportation. Although river transportation is generally of lessening significance in the regional economy, its importance has grown along the lower Mississippi River and on the Mobile-Black Warrior system; and extensive improvements are in progress for Tennessee River navigation. An intra-coastal waterway for vessels of moderate draft has been provided, by dredging and canalizing along more than three-fourths of the Atlantic and Gulf Coasts. Channel deepening has provided for the development of such inland ports as Richmond, Jacksonville, Beaumont and Houston.

Bailey of SC thinks this is not lessening

In the Mississippi Alluvial Valley and in the Atlantic and Gulf coastal plains acres of wet land have been reclaimed by drainage. There are equally large areas of fertile soil which could be brought into cultivation if the costs of drainage and land clearing would permit. However, one-half of the drained land is idle, and in some areas conflict between adjacent drainage districts has resulted from lack of coordinated design.

Malaria takes a heavy annual toll of life and vigor in all of the southern states, particularly in rural communities. Its incidence may be and has been reduced materially by drainage of swamps, marshes and other areas of pooled water. The cost of essential work over a six year period as estimated by drainage basin committees would exceed $200,000,000.

Most of the land receives adequate rainfall for crop production. Only 2,650,000 acres of land in the South has been improved by irrigation. The larger and more prosperous part of this has been developed for rice cultivation in the humid sections. In the semi-arid western section, except along the Rio Grande, irrigation from ground and surface sources is in the stage of new development. Texas and Western Oklahoma irrigation would be desirable for at least part of the growing season in almost every year to insure crop production, but it has been developed economically in only a few acres. Most of the development has been from wells and in most cases their capacity has been over estimated.

The shallow sounds along the south Atlantic and eastern Gulf coasts are important wintering grounds for game varieties of waterfowl. Similarly, the sport fishing along the coasts and in the inner sounds is a notable recreational attraction. The commercial fishing and shell fishing in the same areas contribute an important part of the seafood supply of the United States but their existence is threatened by overfishing, and by water pollution in a few places.

Much of the best farming land in the South and many of its important cities lie within the reach of floods in the valleys of its larger rivers.

The alluvial valley of the Mississippi, 31,000 square miles of level, fertile land in a climate highly favorable to agriculture, has a population of more than two million, and is traversed by railroads and Federal highways of national importance. When the great flood of 1927 overflowed almost three-fourths of that valley, drove three-quarters of a million people from their homes and inflicted property damages estimated at $220,000,000, it was plain that the $365,000,000 previously spent on protection works must be greatly supplemented. Communities on many other southern rivers are within the zone of danger from high floods. Protection for many of them has been provided by recent Federal works. Federal studies for flood control in areas of major flood danger are in progress by the Corps of Engineers, parallelled by Department of Agriculture studies of means of retarding run-off, increasing groundwater storage and reducing soil erosion and consequent channel-silting. In many southern valleys large areas of unimproved fertile land and of cultivated land are subject to recurrent flooding, the prevention of which has heretofore not been found economically warranted, although their protection may be justified in the future under conditions of more intensive use.

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 4

POPULATION

The South, more than any other section of America, is confronted with the problem of excess population. Already it is the most thickly populated rural area in the United States. Its population is growing more rapidly than that of any other region. Its excess of births over death is 10 per thousand, as compared with national average of 7 per thousand; within the next twenty years, the natural increase of population in the South may be expected to reach more than 7,000,000.

Significant in the South's population figures is this rate of increase. Of the native born population of the country in 1930, 28,700,000 were born in the Southeast, all but 4,600,000 in rural districts. Of these Southerners born in rural areas, only 17,500,000 live in the area where they were born. Hence it is clear that more than 6,500,000 have moved elsewhere, and of that number 3,800,000 have left the South entirely. Of the others, 2,900,000 have moved to cities of the South.

Rural districts of the Southeast have exported one-fourth of their natural increase in sons and daughters. They have supplied their own growth, much of the growth of southern cities and still have sent great numbers into other sections.

60 p c of grad. students in South stay in South

This migration has taken many of its ablest people away from the South. Figures are lacking for the structure of southern society as a whole, but about 45 percent of the eminent social scientists, and 60 percent of the natural scientists who were born in the South are now living elsewhere. There is every reason to believe that the search for wider opportunities than are available in the over-crowded, economically undeveloped southern communities drains away the people from every walk of life.

The expanding southern population likewise has a marked effect on educational standards and costs. The largely rural states of the South must support nearly one-third of their population in school, while the industrial states support less than one-fourth. Even if the southern states were able, therefore, to spend dollar for dollar of wealth with other sections, a great gap would still remain, on a per capita basis. ?

Moreover, the productive middle age groups leave the South in the greatest numbers, tending to make the South a land of the aged and the young. A study of one southern community in 1928 showed that about 30 percent of the households were headed by women past middle age. Since 1930 most of these women, formerly able to live by odd jobs and gardening, have gone on relief. Relief studies in the eastern cotton belt have shown recently that 15 percent of the relief households were without a male of more than 16 years and 15 percent more, or 31 percent altogether, were without any employable male.

Increasing population pressure has upset racial relationships that once appeared to be fixed for many future generations. In such trades as barbering, waiting tables, tending elevators, Negroes have been displaced almost entirely within the past quarter century, and in the building trades they are rapidly being displaced. Whether this conflict of economic interest between the Negro and the economically submerged white has resulted in additional race tension or in bringing the two nearer to a common understanding, is a moot question. Its effect in lowering the already too low living conditions of the Negro would appear indisputable.

The export of population, of course, reflects failure of the South to provide adequate opportunity for its people. If the South divided up all its crop land evenly among its farmers, those farmers would have only half as much land to work as the average American farmer outside the South.

Big families have grown up on the average southern farm in recent generations. When the children reached maturity, either that farm - already too small - had to be cut into smaller farms, or some of the children had to move away and find jobs in factories or trade.

The South has been cutting good farms into small farms consistently since the War Between the States. And as the region grows older this partition is more intensive. Nevertheless, because of the depletion of the soil, in the older southern states east of Texas there was actually less land under the plow in 1930 than in 1860, though the farm population had nearly doubled. In 1930 the region had nearly twice as many farms less than 20 acres in size as it had in 1880. These figures mean a serious maladjustment of people to the land, and consequent misuse of its resources.

Challenged by Wanamaker

Woofter. 60 pc of net migration from farm to city 1920-30 was in South

But a recent reversal of the trend toward ill-equipped small farms is presenting the South with new problems. If southern farmers are to till larger farms, of economic size, they must substitute tractors and gand plows for men and mules, and this is being done in some areas. But while the advent of the tractor may cut down the cost of operating a farm by doing the work of many men, it provides no new employment on the farm for the men displaced, and also causes a drain on the small amount of cash usually available. A farmer can raise the feed for a mule but not for a tractor.

gang?

It has been estimated that nearly 3,000,000 young people matured into the 15-25 age group between 1930 and 1935 in the rural districts of the southern states. Barely half a million took places left open by deaths; the same number stayed in school; and the increase in number of farms, mostly subsistence farms, took care of about a quarter of a million. Remaining are some 1,750,000 who stay in the farm home as casual laborers or else are unemployed.

Recent southern migration figures indicate a lessening in the drain to cities, and in some sections the rural population has increased. The Appalachian and Ozark areas, for instance, have shown a rapid increase, the Gulf Coast's recently cut-over sections a slight gain, and the old black belt cotton counties and Mississippi delta counties either have been stationary or have shown slight gains. This means an intensification of the problem, particularly as it relates immediately to the South.

But for the nation as a whole, the South's expanding population also has its omens. A child born in and educated in Alabama or Mississippi, in about 12 percent of the instances, contributes his life's productivity to New York or Illinois. Above all, the nation's future — its children — is bound up with the destiny of the South.

REPORT ON THE ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 5

TAXABLE WEALTH

Southern families as a rule have more mouths to feed, more backs to clothe, and more children to school than the families in other regions. The average southern family has one and one-half times as many children as the average family in the Northeast. Southern families as a rule have less money to pay for food, clothes and schooling than families in other parts of the country.

Southern farms are crowded and ill equipped. Though more than half the farm people in the country plow the land of the South, they get only a fifth of the nation's agricultural income as a reward for their effort. It can be stated flatly that the average southern farmer doesn't make enough out of his farm to feed and clothe and school his children decently.

Southern mineral lands are rich. But they are owned mostly by corporations which have their headquarters in money centers elsewhere. The wages paid the Southerners who work for these corporations are relatively low. The profits are paid to corporation owners and managers outside the southern states where they cannot be taxed to support southern schools or give security to southern people. People of New York collect more than three times as much in dividends and interest as the entire thirteen southern states put together.

Even with these low wages, the wageearners often have more than the small farmers - Crosby

The property is not there to tax rurally.

In 1936 half the families in the little towns and on the farms in the South made less than $765. This does not include those on relief. More than half the self-supporting rural families had to live on less than $765 plus the food grown at home and the use of their homes. Out of a total of $1,100 including home-grown food and free rent, the average southern rural family had to eat, buy clothes, pay for a home, provide schooling for its children, and pay taxes and all other family expenses. It was able to put aside an average of only $6 a year to meet hard times, sickness, loss of job, or old age. Many thousands of southern rural families who are below this average have to get along for a year on as little as $300. They, of course, can not put aside anything for a rainy day.

The average self-supporting Negro family in the rural South got less than $480 for its year's work including food grown at home and free rent. For the schooling of his children the father of this average Negro family spent $2. If he had two children that was $1 a year for each child. He had $17 a year to pay for doctors and medicine.

Rural people with such incomes as are here described make up seven-tenths of the southern population. In most of the southern states a large proportion of them are denied the fundamental rights of citizenship because they can not afford to pay the poll tax in order to vote.

8 States still have poll tax
LR Mason

The southern states are no richer than their citizens. The southern people cannot buy through their local governments enough of the things which are bought with taxes. The rural people of the South, with one-eighth of the nation's children, have one-fiftieth of the nation's income. People in the

Northeast with an equal number of children receive a fifth of the national income. Southern people cannot, of course, support schools which are able to train their children as well as they deserve. Few of the South's children can start out on an equal footing with children of other sections because they have not had an equal opportunity to get training in public schools.

The thirteen southern states in 1936 spent an average of $25.11 per child on their schools. This was less than half as much as is spent by the country as a whole, and a little more than a quarter of what is spent per child on public school education in New York State.

This difference is based on ability to pay taxes, not on willingness. The six wealthiest states in the country have a population little greater than that of our ten poorest states. But they have more than three times as much income per person as the ten poorest states.

The low tax incomes of southern states are, in part, the result of the various states bidding against each other for factories by offering low tax rates. But mostly the tax incomes of the states are low because the taxable wealth is low.

Policy not sound. But yet had much effect. Industry coming in gives empl't. Discrim between tax payers.

The average assessed value of property per person in 1935 was $463 in the 13 southern states and $1370 in the nine northeastern states. The northeastern states simply had three times as much property to tax. The southern states tax their wealth as heavily in proportion as other states.

In 1936 the state and local governments of the South collected $28.88 per person; the state and local governments of the nation as a whole collected $51.54 per person.

The South's taxable wealth is so low that it has turned to levying taxes which can be added to the necessary expenditures of its people - chiefly to taxes which are paid out of low incomes. It has turned to gasoline taxes, gross receipts taxes, sales taxes, and other levies which add a burden to a people already poorer, on the average, than the people of any other region. In each of the southern states except Alabama, 59 percent or more of the states' revenues are derived from such taxes. It is significant that none of the northeastern states takes more than 44 percent of its revenues from such sources, while the average for the northeastern region is much lower.

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 6

EDUCATION

It has long been a commonplace in this country that adequate schools and all other means of public education are indispensable to the successful functioning of a democratic nation. The American people have definitely committed themselves to the principle that the children of this country, without respect to economic status or place of residence, are entitled to an equal opportunity to obtain suitable education, so far as it can be provided in the public schools.

The recent economic difficulties have added to the problem of maintaining adequate educational facilities, but from any long-run point of view it is obvious that the United States is more able now than ever before to supply suitable care and training for its children and young people. The child population has doubled since 1880, but the population of adults has increased more than threefold in the same time, and our productive capacity per worker is far in excess of what it was fifty years ago.

In the South, owing to the higher birth rate and to migration of adult workers, the proportion of productive workers to school children is much lower than elsewhere in the country. In six southern states there were, in 1930, over 600 children from 5 to 17 years of age for each 1,000 adults between the ages of 20 and 64. In six other states, New York, Illinois, Nevada, Washington, Oregon, and California, there were fewer than 400 children from 5 to 17 years of age for each 1,000 adults 20 to 64 years of age.

In the rural regions of the South there is a marked disparity between the number of children to be educated and the means with which that education is to be supplied. For example, in 1930 the rural inhabitants of the Southeast had the care of 4,250,000 children of school age (or about 14 percent) although it received an income of only about two percent of the nations total. In the nonfarm population of the Northeast, on the other hand, there were 8,500,000 children in a group that secured 42 percent of the total national income -- twenty-one times as much income available to educate only twice as many children.

These differences in the size of the educational load, bearing so heavily upon the South, are continuing. In 1936 the rate of natural increase in the population was greatest in the southeastern and southwestern sections of the United States, precisely where the lack of educational opportunity is already most pronounced.

It has frequently been said that the high mobility of population so characteristic of the United States makes this inequality of educational opportunity a matter of national concern. It is not so generally understood, however, that this tendency toward migration operates so as to lay a heavier burden on the South. In the 1920's the states south of the Potomac and Ohio rivers and east of the Mississippi lost about 1,700,000 persons through migration, about half of whom were between 15 and 35 years of age. These persons moved at the time of the beginning of their productive life to regions which got this man power almost free of cost, whereas the South, which had borne the expense of care and education of these migrants up to the age of economic productivity, suffered an almost complete loss of its investment in these young persons. The cost of rearing and schooling the young people who migrated to the cities of the entire nation, paid by the farmers of the South, was $700,000 annually or more than half the value of the cotton crop.

Thinks Ark. & La included here

Cotton crop brought nearly (2 billion?
(much over twice this) Wanamaker

The southern regions are affected by population shifts more than other sections because the greatest proportion of migrants originate there. These productive workers, cared for at home in their early years, leave behind them an area with a disproportionately large number of children. Thus, the rural sections of the South must support nearly a third of their population in school, while the industrial sections of the North and West have less than a fourth of their population in school.

The South's taxable wealth is low. It must educate one-third of the nation's children with one-sixth of the nation's revenues for school. It has only a third as high assessed value of property per person as the Northeast. The total estimated wealth of the nation in 1932 was $247,300,000,000. Almost one-third of this amount was held in four states -- all outside of the South. According to the most conservative estimated, the per capita ability of the richest state in the country to support education is at least six times as great as that of the poorest state.

The South collects total taxes less than half as much per person as the nation as a whole.

On any basis so far available the tax paying ability of states like California, New York, Connecticut, and Massachusetts averages from two to four times as great as that of such states as North Carolina, Georgia, Kentucky, and Arkansas.

Between 1933 and 1935 more than $21,000,000 of Federal funds were necessary to keep open rural schools in the nation but more than 80 percent of this amount was needed in the South due to inability of local and state governments to carry the burden.

In 1933-34 the average school child of Mississippi had $18.93 spent on his education; at the same time the average school child of New York state had $124.32 spent on his education -- just 6½ times as much as that of his Mississippi brother. In that same year, the thirteen southern states were the thirteen lowest in the United States in expenditure per pupil enrolled in public schools, and in expenditures per pupil in average daily attendance these same thirteen states were again the thirteen lowest.

In the South only 16 percent of the children enrolled in school are in high school as compared with 24 percent in states outside the South.

The average annual salary of teachers in Arkansas for 1933-4 was $465 compared to $2,361 for New York state for the same year, and in no one of the southern states was the average salary of teachers equal to the average of the nation.

The value of school property per child in Mississippi in 1933 was $60; in Massachusetts it was $570, or 9½ times as much. Over 65 percent of the school buildings in Mississippi are one-room schools. In that state there are actually 1,500 school centers without school buildings, the pupils attending school in cotton pens, abandoned tenant houses, and country churches.

If the southern states spent the average per pupil of the nation as a whole they would require an additional quarter of a billion revenue.

Qualifications of southern teachers compare favorably with the nations average but no where in the nation is the number of pupils per teacher as high as in the South. Overcrowding of schools, particularly in rural areas has lowered the standards of education. The short school term of southern rural schools further reduce their effectiveness.

But the poor educational status of the South is not a result of small effort to support schools. All southern states fall below the national average in tax resources per child and exceed the national effort to support public schools.

Higher education in the South has lagged far behind the rest of the nation. The combined productive funds available to the higher institutions of the South are less than the combined endowments of Yale and Harvard. The South has not even the facilities to educate sufficient doctors for its own needs.

Salaries $\frac{1}{3}$ less, teaching load $\frac{1}{3}$ more in Southern colleges

Texas, Va + N C only 3 of the 32 universities in the country that are in the South

Natl. average cost in pub schs $60 yr per child

Graham

Not sufficiently elaborated on fact that S. not getting its share of Fed. Educ funds (it was referred to in taxation)

Persons - Ala -

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 7

HEALTH

For years evidence has been piling up that food, clothing and housing definitely influence not only sickness rate and death rate but even the height and weight of school children. Wherever family income is low the sickness rate is high. The low income figures of the South have a definite relation to the high sickness and death figures.

Several years ago the United States Public Health Service conducted syphilis control demonstrations in selected rural areas in the South. These studies revealed a much higher ratio of syphilis among Negroes than among whites, but showed further that this higher ratio was not due to physical difference between the races. It was found to be due to the greater poverty and lower living conditions of the Negroes. Similar studies of such diseases have shown that individual health cannot be separated from the health of the community as a whole.

The presence of malaria, which infects annually more than two million people, reduced the industrial output of the South one-third. One of the most striking examples of the effect of malaria on industry was revealed by Public Health Service in studies among employees of a cotton mill in eastern North Carolina. Previous to the attempts to control malaria, the records of the mill showed sixty-six looms were idle in September. After completion of control work, no looms were idle in September. Before control work 238,046 pounds of cloth were manufactured in one month. After completion of the work, production rose to 316,804 pounds in one month an increase of thirty-three and one-third percent.

In reports obtained in 1935 from nine lumber companies owning fourteen sawmill villages in five southern states, there was agreement that malaria was an important and increasing problem among the employees. During the year 7.6 percent of hospital admissions, 16.4 percent of physician calls, and 19.7 percent of dispensary drugs were for malaria. The average number of days off duty per case of malaria was nine, while days in the hospital for the same cause were five. Ten railroads in the South listed malaria as an economic problem and a costly liability. Four water power and electric companies had full time mosquito fighting crews at work during the year. Admissions to company hospital days per case were three, and average days off duty were eleven. Each case of malaria was said to cost the companies $40.00.

If we attempt to place a monetary value on malaria by accepting the figure of ten thousand dollars as the value of an average life and using the death rate of 3.943 for malaria reported by the Census for 1936, the cost of deaths from this disease is $39,500,000. To this figure could be added the cost of illness, including days of work lost.

More than 1500 southern people die from typhoid fever every year. For each death there were four hundred to five hundred days lost from work by people who recovered.

The low income belt of the South is a belt of sickness, misery and unnecessary death. San Antonio, Texas and Washington, D. C., have the highest and second highest death rates respectively from tuberculosis of any cities in the nation. Between them lies the South - with its large proportion of low income citizens more subject to disease than are those of any similar area. The climate cannot be blamed - the South is as healthful as any section for those who have the necessary care, diet and freedom from occupational disease.

The health protection facilities of the South are limited. There are only one-third as many doctors per capita in South Carolina as there are in

California. The South is deficient in hospitals and clinics, as well as in health workers. Many counties have no facilities at all. The South has only begun to look into its pressing industrial hygiene problems although it has 26 percent of the male mine workers in the United States and 14 percent of the male factory workers. These are the workers with which modern industrial health protection is most concerned.

The experience as to pneumonia and tuberculosis among employees of the Tennessee Coal, Iron and Railroad Company and their dependents during the 11-year period from 1925 to 1935, gives an indication of health conditions among miners in the South. For this period, the population under observation averaged slightly more than 77,000 persons. There were 3,780 cases of pneumonia, of which 739 terminated fatally. This resulted in an average frequency per 1000 of approximately 4.9 pneumonia cases per year among surface workers, 4.7 among coal miners, and 10.6 among ore miners. The rate of 4.2 for dependents included also the pneumonia of childhood and infancy. A fatality rate of 30.7 deaths per 1000 cases of pneumonia was found among surface workers, a rate of 26.8 among coal miners and 24.8 among ore miners. Deaths from tuberculosis occurred at an annual rate per thousand workers of 1.467 among coal miners, 1.232 among ore miners, and 0.566 among surface workers.

Compare with other Company. This co. one of most advanced in South in health for employees. Persons [illegible] Ga.

Prior to 1936 only one State in the South gave consideration to the industrial hygiene phase of public health. While today, with the aid of funds from the Social Security Act, there are seven additional units of industrial hygiene in as many states in the South and approximately seven million of the ten million gainful workers are receiving some type of industrial hygiene service, it must be kept in mind that these industrial hygiene units have but recently inaugurated programs, many of which are still in the early stage, and it will be some time before adequate health services will be available to these workers. These industrial hygiene units cannot even properly appraise the conditions affecting the health of the South's industrial workers, much less adequately apply control measures for the improvement of their health. The funds now being expended for this activity in the eight states which have industrial hygiene services at present do not meet the problem of protecting and improving the health of these workers. Approximately $100,000 is now being budgeted for this activity, whereas it is known that the economic loss due to industrial injuries and illnesses among these workers is well over a billion dollars.

from State public health figures

That more people in the southern area than elsewhere die without medical aid is indicated by reports of the Metropolitan Life Insurance Company on deaths listed as of unknown or uncertain cause.

WB

The Metropolitan Life Insurance Company reported in a recent year a rise of 7.3 percent in the death rate in the nine South Atlantic States, though in no other region had the death rise been above 4.8 percent and in some sections it had declined. The scourge of pellagra that affects the South almost exclusively, is a disease chiefly due to inadequate diet, responding to rather simple preventive measures of suitable nourishing food. From 60 to 88 percent of the families of low incomes in the various cities are spending for food less than enough to purchase an adequate diet.

WB

REPORT ON ECONOMIC CONDITION OF THE SOUTH

(Preliminary draft - not for publication)

Section 8

HOUSING

The effects of bad housing can be measured directly in the general welfare. It lessens industrial efficiency, encourages inferior citizenship, lowers the standard of family life, deprives people of reasonable comfort. There is likewise a direct relation between poor housing and poor health and crime.

The type of slum most usual in southern towns consists of antiquated, poorly-built, standardized rental quarters for working people. The rows of wooden houses without any modern improvements, without proper sanitary facilities and often without running water, are usually in congested areas and in the least desirable locations next to mills or mines where tenants work, or on low swampy land which is not usable for anything else and sometimes subject to floods.

Lack of running water or impure water supply and lack of bathtubs and laundry tubs, are among the widespread deficiencies. Surface wells are often contaminated in the open country, in villages and small towns. Typhoid fever, which is spread by contaminated milk and contaminated water, is becoming a rural disease. Sometimes city water is supplied through a yard hydrant shared by several families.

Lack of sanitary flush toilets and a sewer system for waste disposal is characteristic of not only the great majority of farm and rural homes, but a large proportion of homes in small towns and a substantial number in the cities.

In extensive rural districts there are not only no indoor flush toilets, but no outdoor privies even of the most primitive sort. Nearly a fifth of all southern farm homes have no toilets at all. It is in these regions that hookworm infection and consequent anemia have flourished as a result of soil polution.

Houses in the rural South are the oldest, have the lowest value, and are more greatly in need of repair than any farm houses in the United States. That there are 2½ million substandard homes would be a conservative estimate. Of the 3 million farm homes in the 14 states including West Virginia, in 1930, only 5.7 percent had water piped to the house, and 3.4 percent had water piped to the bathroom. More than half the farm homes are unpainted. An unpainted house weathers and rots sooner. More than a third of southern farm homes do not have screens to keep out mosquitos and flies.

Twenty-six percent of the southern city or town households are without indoor flush toilets as opposed to 13.1 percent for the urban households of the country as a whole. There is also extensive over-crowding in the southern town areas. In one-eighth of the dwellings there are more than 1½ persons per room. In the United States as a whole only one-fourteenth of such houses are so crowded. In 19 southern cities specially studied, over 40 percent of all dwellings rent for less than $15 per month or are valued at less than $1500, as opposed to 24.6 percent for the 64 cities studied in the country as a whole. Even more significant is the estimate that 22.6 percent of southern residential structures are in bad condition compared to 18.1 percent for the Nation as a whole.

If we consider below-standard all non-farm dwellings in the 14 southern states including West Virginia renting for less than $10 a month and all owned non-farm dwellings valued at less than $1500 - we find 1½ million substandard houses. Recent studies by local housing authorities in many of the southern cities show the correctness of these assumptions. In addition, many houses now renting between $10 and $15 are definitely substandard. The average farm home in the South is worth about $650. The average farm renter's (Including tenants) home is worth about $350 according to the Federal Census of 1930.

Southern cities have one important advantage over northern cities as they approach the housing problem. They are not hampered by the excessive land valuations that have developed in the North with the rapid growth and centralization of industry. Although the 1930 census compared to 1920 shows that the rate of urbanization as well as the absolute urbanization is greater in the South than in the North, the effect of this concentration of population is not yet reflected in land values, and is not apt to be while wages remain low. It is however reflected in poorer living conditions, overcrowding and greater danger of the spread of communicable diseases.

By the most conservative estimates 4 million southern families should be rehoused. This is one-half of all families in the 14 states.

Canada long has given homestead tax exemption to farm homes

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 9

UNEMPLOYMENT AND RELIEF

Poverty and destitution are by no means depression phenomena in the South. Here as elsewhere the developing sense of public responsibility which followed close behind the depression served to bring to the public attention problems which had been becoming more and more acute.

The problems involved in relieving this destitution are, therefore, inextricably bound up with the factors making for poverty in the South. Not only have the lack of capital, overdependence on a one-crop cotton economy, depletion of natural resources, persistence of feudal relationships in agriculture, reliance on a mistaken belief in the necessity and value of low wages in industry, and other sources of maladjustment in the southern economy created a large body of people whose need is so great as to make individual relief a necessity, but relief as a public function has become an important factor in the social and economic readjustment taking place in the South.

Mason wants this also inserted on p 39 #10.

The general relief program undertaken with Federal funds in 1933 brought graphically before the public evidence of the widespread poverty which had previously, for the most part, been either accepted or ignored. It is evident that an average annual income for share-croppers of $312, a per-capita farm income of $183 per year, a total per capita income of $365 and ~~wages~~ industrial earnings for workers 30 percent to 50 percent below national averages do not provide a high standard of living, let alone a margin of security against either depression or the economic adjustments now taking place in the South. It is not surprising therefore that every kind of need was represented in the first catch - all general relief program and later on the differentiated

Lubin i.e. not rates

programs for farm owners, tenants, young people, unemployables, and the able bodied unemployed that succeeded it.

The first function of a relief program was to provide the bare necessities for survival. This it did in the form of low direct grants, primarily in food orders. In July 1933, average relief grants to maintain a family for a month were $3.83 in Mississippi, $4.38 in Oklahoma and reached a comparatively high level in Virginia and Texas at $6.94 and $6.93 respectively. Although these figures were gradually raised, it has become apparent that the problem of adequate relief in the South is not solely a problem of preventing the starvation of individuals but is also an important factor in the total economy of the region. This has served to complicate problems which in terms of individual welfare appear simple.

The problem of relief standards in the South is, for example, confused by the question of its wage policy. The Works Progress Administration undertaking to utilize idle man power on projects of public benefit maintains a wage differential between North and South that its own studies on varying costs of living do not justify. On the other hand even this wage level providing average monthly earnings of $31.33 is attacked by employers who feel that it interferes with their traditional right to an unlimited supply of cheap labor.

The problems of southern agriculture are similarly involved in questions of relief policy. On the one hand acceptance of relief as an essential public function is delayed by the traditional belief that a landlord is responsible for his tenants even though ownership is more and more passing into the hands of large, impersonal corporations with no knowledge of, or sense of responsibility for, their tenants, and even though tenancy is giving way more and more to day labor. On the other hand rapid displacement from cotton production is already taking place and, according to some experts, should continue to take place if a healthy adjustment is to be attained. Relief in such cases becomes not only a necessity for the individuals involved in major economic change especially in agriculture but it is confronted with its share of the national problem of depression unemployment or under-employment due to decline in industrial production. Seasonal employment at wages too low to carry workers through the slack season also presents a relief problem.

is going to continue + hence will have to be adjusted to. Gov Bailey

No adequate figures are available on the number of people in the South whose income level is sufficiently low to entitle them to some favor of public assistance. Our knowledge of the problem is still limited to the extent of assistance available which, especially in the field of direct relief, is seriously inadequate.

However the extent of the problem is indicated by the fact that in the thirteen southern states a total of 1,404,049 families,* certified as in need of relief, were receiving public assistance in April 1938 either in the form of work or a direct grant.

This bloc of people comprise a substantial section of the southern population and the purchasing power represented in the $32,000,000 they receive each month is an important factor in the national as well as southern economy.

Funds for general relief and the state's share of public assistance benefits present a financing problem to the states which has so far not been satisfactorily solved. On the other hand Federal funds, representing in the long run returns from the income tax, bring about a more equitable distribution of purchasing power not only to individuals but also to the country as a whole. Federal funds flowing into the maintenance of the economy through relief programs constitute one way to renew the springs of southern prosperity. With absentee ownership draining away the spending power of the South, Federal funds expended to relieve destitution and provide some measure of security to persons disinherited by economic change in the South open up a vast market to the nation as a whole and so serve to right an unbalance in the national economy which has existed since the War Between the States.

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* Since no unduplicated relief figure is available this figure represents a total of all benefits rather than of the actual number of families. Some families, of course, receive more than one benefit.

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 10

LABOR

The industrial labor situation in the South is in large part governed by the agricultural situation. Despite the growth of southern industry in the last half century, agriculture is still the South's chief economic activity. But southern agriculture does not provide an adequate income for the masses of its workers, whose ranks in the southeastern section are augmented by the highest birth rate in the United States.

Southern Birthrate 50 pc too great to replace population. In industrial areas in North deficient (10 pc or 30 pc?) Dawson.

50 pc of migration to urban areas (of N & S) is from S. Graham

For many years the farms of the South have poured into southern industrial cities a flood of workers whom the farms could not support. This flood of workers has been far greater than the mills and factories have been able to absorb, and they remain to compete for jobs.

A large proportion of these workers have lived a hand-to-mouth existence, dependent on seasonal employment. They suffer from malnutrition. They lack the educational benefits which impoverished State governments cannot provide. They come to factory and mill untrained for machine industry. They accept wages which are low as compared with industrial wages elsewhere in the nation. Labor organization has made slow and difficult progress among them, and they have been without collective bargaining power or organized influence on social legislation. Hours of work have been relatively long, and with a few exceptions, no southern state has reached the legislative stage of an eight-hour day, 48-hour week for women. Child labor has been a painful feature of the southern factory situation. In spite of discriminatory freight rates and other artificial barriers, southern industry has expanded by virtue of lower living and working standards than those prevailing in other regions. For nearly two decades, a large part of the South's increase in industrial activity has been brought about by the removal of cotton-goods manufacturing plants to the Southeast from high-wage areas in New England. But the whole expansion of southern industry has not been great enough to absorb the large number of workers who have poured in from the farms.

The cotton-goods industry, in which the greatest expansion has occurred, is now the backbone of southern industry. Though this industry ranks, elsewhere in the nation, as one of the lowest-paid manufacturing industries, it sets the industrial wage-pace in the South because of its magnitude. In other regions, the industrial wage-pace is set by meat-packing plants, steel-works, automobile works, etc. In the South, these industries pay higher wages than the cotton-goods industry, but they are not important enough to set the wage-pace.

According to 1937 figures, the pay for the most skilled work in the southern cotton-goods industry is about 12 cents less per hour than the pay for the same work in other regions. Wage differentials between the South and other regions are found not only in textiles, but also in lumber, furniture, iron and steel, coal mining and other industries generally. But it is in the unskilled occupations more easily filled by people straight from the farm that wage differentials between the South and the rest of the country are widest. In twenty of the country's important industries in 1937 the average differential in the entrance rates of common labor amounted to 16 cents an hour.

More significant than the average wage is the large number of southern workers receiving low wages and the small number receiving high wages. Comparative tables in industry after industry show a concentration of southern workers in the low-wage brackets. Here again the cotton-goods industry is fairly representative. More than half of the workers in southern mills earn under 37.5 cents an hour, as compared with less than

10 percent in the rest of the nation; and less than 10 percent of the southern workers are paid more than 52.5 cents an hour, as compared with more than one-fourth in the rest of the nation. In spite of longer working hours, the total annual wages show the same discrepancy.

Reasons for the wage differential between the South and other regions include the concentration in cities of a mass of unskilled workers from the farms, ^ and the lower productivity of these workers because of their lack of industrial experience and training, their malnutrition and lack of education. Another reason for lower earnings in the South, of course, is the lesser degree of mechanization of many of its industrial plants as compared with the North.

Mason wants to add "mistaken belief in low wages" from #9, p1.

Southern industry has tended to follow the course of all American industry into the paths of collective bargaining, higher wages, and lower hours in recent years, but the wages of the workers of the South still provide them with inadequate purchasing power. The low purchasing power of southern workers is reflected in a low standard of living which for many of them amounts to a state of chronic malnutrition. Large numbers of them have been living for years only half-employed, or a quarter-employed, or scarcely employed at all. Widespread unemployment, such as that which produced crises in some of the great industrial cities of other regions when it suddenly occurred, has long been almost a chronic condition in various parts of the South.

Callahan thinks point from #5 (Taxable wealth) of large size families should also be put in labor section as a reason for high wages. (Use as argument to offset counter low wage argument of favorable climate.)

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 11

LABOR OF WOMEN AND CHILDREN

Low wages for men in the South frequently force their wives and children to work in an effort to provide the essentials of life. This floods the market, and tends to force all wage levels still further downward. Thus the South whirls in a vicious circle to lower and lower levels.

Both child labor and woman labor are more prevalent in the South than in any other section of the nation. They operate under less stringent statutory limitations than elsewhere.

The 1930 census, latest source of comprehensive information on child labor, showed that about three-fourths of all gainfully employed children from 10 to 15 years old worked in the southern states, although these states contained less than one-third of all children between those ages.

Child labor undermines the security of the adult worker and as a source of cheap competing labor is a contributing factor to low wages, long hours, and general low labor standards. The effects of child labor, therefore, are not limited to the child himself but involve the whole community and indeed the whole nation.

The 1930 census showed that the South exceeded the nation in the employment of children in both farm and industrial work. One hundred and eight out of every 1,000 children between 10 and 15 years old were employed in the South, compared to 47 out of every 1,000 children of these ages in the country as a whole. Only two of the southern states (Oklahoma and Virginia) had a rate of child workers lower than the average for the country. Child labor legislation in these 13 states, as in the United States in general, does not apply to agricultural work but is directed primarily to industrial and commercial employment. In some instances, the coverage of the law is restricted to a few types of industrial establishments, and in other instances contain exemptions which greatly weaken their effectiveness. Two states in the southern group, North Carolina and South Carolina, have recently established a basic minimum age of 16 years for employment. Texas has a 15-year minimum age standard, but it applies only to factory and related employment. The remaining 10 states have a minimum age of 14, but in 8 of the 10 states the laws contain exemptions permitting employment below this age.

The effectiveness of child labor legislation, of course, depends upon the provisions for enforcement. Employment certification and proper inspection have been considered necessary. Three of the five states in the country which have not made legal provision for employment certificates are found in the South.

Employment of children affects the school attendance. The proportion of children 10 to 15 years of age in the southern states attending school in 1930 was 90 percent, as compared with 94 percent for the United States as a whole.

The upper age for compulsory school attendance throughout the country as a whole is generally 16, 17, or 18. However, two of these southern states require attendance only to 14, and one to 15; in only two of the southern states under consideration does the upper age extend above 16 years, and all permit exemptions which materially lessen their effectiveness. The school term generally is shorter in the South than in other sections of the country.

In many parts of the South, legislation to protect women workers and to establish proper working standards for them has not been well developed. This has had far-reaching effects on the health, the living conditions, and the general welfare and happiness of women and their families.

Many employers have moved into this region to exploit the workers. Women are generally the most exploited of the working population. Appreciable proportions of women are working more than 50 hours a week in cotton and other textile mills, shoe, bag, paper box, drug, and other factories in certain southern states.

The South has two of the four states in the entire nation that have enacted no laws whatever to fix maximum hours for women workers. Only one of the southern states has established an 8-hour day for women in any industry. Only three of the southern states have applied to any industry a week as short as 48 hours for women.

The reports for a number of industries, including cotton manufacturing, showed that the wage earner received on the average a wage well below that estimated by the Works Progress Administration as the lowest cost for maintaining a worker's family.

Women's wages ordinarily are well below men's. However, only one of the southern states has enacted a statute providing a minimum wage for women, though several others are attempting to pass such legislation. Recent payroll figures show women textile workers in an important southern textile state receiving average wages 10 percent below the average outside the South. Other figures show that a week's wage of less than $10 was received by more than half the women in one state's cotton mills, and by large proportions of the women in the seamless hosiery plants of three states and in the men's work-clothes factories of two states.

Many women, even though at work full time, must receive public aid because their wages are insufficient to care for themselves and their children. The community thus carries part of the burden of these low wages, and in effect, subsidizes the employer.

One thing tending to lower women's wages is the system by which factories farm out work to be done in homes. In southern states women have been found at extremely low pay doing such work as making artificial flowers, sewing buttons on cards, clocking hosiery, embroidering children's clothing, stuffing and stitching baseballs. Always the pay is far below that in the factory. A study of industrial work on infants' wear found that the women had worked much longer hours than in the factory, though half of them had received less than $2.73 for this long week's work.

add "in recent years"

A low wage scale, predicated on lower living costs, means in reality lower living standards, a less healthful condition of life, inadequate nourishment for many, greater susceptibility to disease, a greater amount of illness.

Add destruct. of markets by low wages - Carl White (?)

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(Preliminary draft - not for publication)

Section 12

USE OF LAND

The farming South depends on cotton and tobacco for two-thirds of its cash income. More than half of its farmers depend on cotton alone. They are one-crop farmers, subjected year after year to risks which would appall the average business man. All their eggs are in one basket — a basket which can be upset, and often is, by the weather, the boll weevil, or the cotton market.

The boll weevil can be conquered and weather hazards tend to cancel themselves out as good seasons follow bad; but the cotton market is a sheer gamble. On this gamble, more than two million southern families stake their year's work and everything they own. Their only chance of making a living is tied up with the fluctuations of the world price of cotton.

No other similar area in the world gambles its welfare on a single crop market, year after year, on a scale so large or affecting so many people.

The gamble is not a good one. Few other crops are subject to such violent and unpredictable price variations as cotton. In 1927 cotton farmers got 20 cents per pound for their crop; in 1929 they got 16 cents; in 1931 they got 6 cents; in 1933 they got 10 cents. Only once during the last decade did the price of cotton change less than 10 percent between pickings. Three times in five years it jumped more than 40 percent — once up and twice down.

Because cotton is the cornerstone of the southern economy, the merchants, manufacturers, businessmen and bankers share the hazards of the farmer. The men who finance cotton farming must charge high interest rates, because their money is subject to far more than the normal commercial risk. As a result,

figures are
from summary
of some
six surveys of
tenant farmers
in 1934

tenants and sharecroppers who have nothing to pledge but the next crop often must pay interest charges ranging from 20 to 50 percent. Farm owners who can put up their land as security normally pay between 6 and 30 percent.

Objections to
"normally"
and "often"

These comparatively lower interest rates have not meant security for the landowners. All too often they have merely postponed the day of reckoning — the day when the owner loses his property and slips into the growing army of landless tenants. The mortgage debt of southern farm owners has been growing steadily for the last 20 years. A check-up on 46 scattered counties in the South in 1934 showed that one-tenth of the farm land was in the hands of corporations, mostly banks and insurance companies which had been forced to foreclose their mortgages. Often these institutions have been most reluctant to foreclose, and in many cases they have had no greater success in running the farms than the former owners. Today thousands of acres of foreclosed lands are lying idle, with no attempt being made to work them.

While it is growing an over-supply of cotton and tobacco, the South is failing to raise the things it needs. Southern farmers grow at home less than one-fifth of the things they use; four-fifths of all they eat and wear is purchased for cash.

For example, the region has more than half of the nation's farm people; yet it raises less than one-third of the nation's pigs and cattle. Although it has more than a fourth of America's total population, it produces only one-fifth of the country's eggs, milk, and butter; one-seventh of the hay; one-eighth of the potatoes; one-twelfth of the oats. Consequently the South must import these things — paying handling and freight charges — or do without.

Too many southern families have simply done without and as a result they have suffered severely from malnutrition and dietary diseases. The death rate from pellagra, caused by lack of proper food, is eight times as high in the South as it is elsewhere. Such common vegetables as carrots, spinach, and turnips are rarities in many southern farming communities, although both soil and climate are extremely favorable to their growth. Production of foodstuffs could be increased manyfold in the South without infringing on the markets of any other region; most of the rising output could, and should, be absorbed by the very farm families which produce it.

Because they have concentrated on cash crop production, southern farmers have planted relatively little of their land in alfalfa, clover, field peas, and soy beans. These and similar legumes add fertility to the soil; they protect a field against washing and gulleying. If widely used, they would help the farmer to protect his investment in his land and take a little of the gamble out of his business.

On the other hand, cotton, tobacco, and corn use up the natural richness of the land with great speed. Fields planted to them year after year wear out and wash away much more quickly than fields on which legumes are planted in rotation with cash crops. Yet six acres of southern crop land out of every ten are planted one season after another in cotton, tobacco, and corn.

Tradition probably is the strongest force binding the South to one-crop farming. At the close of the War Between the States thousands of impoverished former slave-owners had plenty of land but no capital or labor to work it. Hundreds of thousands of former slaves were willing to work but had no land. It was only natural that the two groups should form a partnership, one contributing the land, the other the labor -- and share the crop between them at harvest time. It was also natural that they should put virtually all the land in cotton or other cash crops which were easy to divide. Consequently, over wide areas of the South cash-cropping, one-crop farming, and tenant farming have come to mean practically the same thing. Under the traditional crop-sharing system of tenancy, diversification has been difficult, simply because landlord and tenant often have not been able to find a workable method of dividing up such crops as garden truck, pigs, and dairy produce.

From sheer tradition the South has stuck to one-crop farming. It will be a hard habit to break: but it is a habit which is breaking the South.

add "and necessity" Judge Fortson Gen Persons

Farm loan will not be made to tenant unless they have a definite farm management plan, which includes certain stock, etc, etc.

Share croppers can not get it unless the owner gives a waiver from his share of the crop, which often he will not do.

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 13

FARM INCOME IN THE SOUTH

The farm population of the South represents the nation's greatest untapped market. If the per capita net income of southern farm families were brought up to a level with the incomes of farm families in other sections, it would create a vast new pool of purchasing power -- large enough to absorb nearly twice as much goods as America exported to all foreign countries in 1935.

The farm families of the South now receive less than a third of the nation's total farm income, although they make up more than half of the nation's agricultural population. Even in the boom-year of 1929, for example, more than 16 million people were living on the farms of the south, while the farm population for all the rest of the nation was only 14 million. Yet the South's gross cash farm income in that year was only about three billion dollars, while the farmers of other sections received considerably more than seven billion dollars.

In other words, southern farm people each received an average gross income of only $186 a year, as compared with $528 for farm people elsewhere. Out of that $186 per capita southern farmers had to pay all their operating expenses -- tools, feed, fertilizer, taxes, and interest on debt -- so that only a fraction of that sum was left for the purchase of food, clothes, and the decencies of living. It is hardly surprising, therefore, that such ordinary luxuries as automobiles, radios, and books are relatively rare in many southern rural areas.

For more than half of the South's farm families -- the 53 percent who are tenants without land of their own -- incomes are far lower. Many thousands of them are living in poverty comparable to that of the poorest peasants in Europe. A recent study of southern plantations indicated that the average tenant family received an income of only $73 per person for a year's work. Earnings of share-croppers ranged from $38 to $87 per person--and an income of $38 annually means only a little more than 10 cents a day.

Families with such incomes can afford few of the things which most Americans consider absolute necessities. Their homes are the poorest in the nation -- unpainted, leaky shacks of two or three rooms, with no screens or sanitary facilities. Their customary diet consists of fat-back, corn bread, and molasses, and as a consequence pellagra and other dietary diseases are far more common than in any other section of America. Few of them can afford even the most rudimentary medical care, and as a result the energy and efficiency of southern farm workers often are low. Such chronic ill-health often is misinterpreted as "shiftlessness;" but no matter what name it is called, it is both a result and an important cause of the South's low income levels.

To make matters worse, the southern farmers' scanty purchasing power forces him to use primitive, inefficient farming methods, which keep his income low. Often he cannot adopt modern methods, simply because the necessary equipment and machinery is out of his reach. In 1929 the South spent less than one billion dollars for farm operating expenses -- including implements, fertilizer, and feed, -- while farmers in other sections spent considerably more than twice as much. In fact, the per capita operating expenses of farmers elsewhere ($199) were greater than the entire per capita income of farmers in the South ($186).

A similar handicap is the inability of the South to raise the earning-power of its people through adequate education. The region has made heart-breaking efforts to school its children, but it simply does not have the wealth to support an education system equal to that of the rest of the nation. The richest state in the South ranks lower in per capita wealth than the poorest state outside the region. If Mississippi, for example, were to bring its school system up to the national average standard, it would have to spend more than 99 percent of all its tax income on this function alone. As a result, the South continues to lag far behind in education; the illiteracy rate in the eleven southeastern states is on a par with that in New Mexico and Arizona -- all 35 of the remaining states make a better showing.

Since the South is primarily an agricultural area, the low level of its farm income and living standards has paralyzed the economy of the entire region. It has been estimated that in 1929 the per capita income of all southerners was $437 annually, as compared with a per capita income of $890 in other sections of the country. This lack of an adequate home market -- both in rural and urban areas -- probably has been one of the greatest obstacles to the development of thriving industries in the South.

These problems would be a subject for national concern, even if they affected only the South. The necessity for coping with them on a national basis is even more urgent, however, because the South's lack of purchasing power has seriously affected every other section of the country.

New York manufacturers are losing profits because the South cannot afford to buy their goods; Detroit workers are idle because southern automobile sales are low; railroads, wholesalers, and scores of other businesses suffer because one of America's greatest potential markets remains undeveloped. Any measure that will raise the income level of the South, will increase prosperity all over the nation. America cannot expect to have a healthy economy so long as 16 million of its people are struggling to exist on an average gross annual income of $186 each.

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(Preliminary draft - not for publication)

Section 14

CREDIT

"Credit supports agriculture, as the rope supports the hanged,"
- Louis XIV

There has never been adequate capital in the South to support the farmers' needs or that of its industries. Furthermore, the bank deposits that do exist are lowest when they are most needed. Because of the one-crop system, the bulk of farm income is in the fall and early winter months, and the need for financing is in the spring and summer. It is in these latter months that the bank deposits are at their lowest.

Because deposits provide the basis for loans, it is difficult to meet the demands of the farmers for current financing and at the same time for the banks to maintain adequate reserves for safety. On top of this situation, the risk involved in financing cotton causes a piling up of loans, with risk and service charges, resulting in an overbearing accumulation of credit costs for the small farmers and tenants. These credit costs have been found by the Department of Agriculture to take away from 25 to 50% of the operating capital of the small, dependent farmers.

The most important sources of credit for small farmers in the South, not including the Federal credit agencies, are (1) landlords, (2) merchants and dealers, and (3) local commercial bankers. In fact, these forms are so extensively used that for large parts of the population they have practically replaced money. Credit from landlords and merchants, including both tangible and intangible costs, retard the development of agriculture in the

South. Instead of permitting advancement, too often the prevailing credit system has been financing economic stagnation and abuse of land resources. The credit merchant or landlord who supplies "Furnish" for the farmer or tenant takes as security the entire crop which, when harvested and ginned, must be turned over for disposal by the creditor in payment of the debt. Most often the merchant keeps the books and states the interest and time price. Even if the merchant is fair and does not charge exorbitant prices and extortionate interest, the result of the reckoning may be a debt for the tenant. This is not necessarily a reflection on the planter-merchant, who very often wishes to improve the status of his tenant, but is forced to exploit him if the planter himself is to survive.

For the merchants and planters are themselves supported by the commercial banking system, and although merchants and landlords may sometimes help to control banks, banking capital is inadequate because the bulk of the savings in the rural areas belongs to the landlords, and such savings won't do the job. With a charge of 50% for production and consumption credit, it is not likely that the tenants will be able to accumulate capital or even to get out of debt, and the small farm owner is in constant danger of becoming a tenant. In fact, the census figures showing the great increase in tenancy indicate that this is happening rapidly.

The position of industry in the South is hardly better. Credit for the development of small industries that naturally belong in the South has been further restricted by legal requirements and regulations of national supervisory authorities. Ordinarily long time loans for capital purposes may be made available by banks only through the purchase of marketable securities. The regulations of the supervisory authorities have imposed such strict requirements as to marketability as to make it almost necessary for a security to be listed on an exchange or to have a regular over-the-counter market before it can be purchased. As locally owned southern industries are for the most part too small to issue securities meeting the marketability requirements, this has meant that southern deposits are forced into the securities of industries located and controlled elsewhere.

Although the South has more than 28% of the population of the United States, of the $28,418,000,000 assets of the life insurance companies of the nation, only $756,000,000, or approximately 2.6% of these assets are held by life insurance companies in these states. Banks in the South held only 11% of the nation's bank deposits, or $150.53 per capita, as compared with the national average, excluding the South, of $471.90. Of the 66 banks of the United States having deposits of $100,000,000 or more, only one is located in the South, and this one barely qualifies. Deposits of June 30, 1937, are given below and illustrate the banking situation in the South.

State	Bank Deposits as of 6/30/37	Average Deposit per capita
Oklahoma	$ 444,890,000	$174.60
Virginia	552,453,000	204.16
North Carolina	374,679,000	107.30
South Carolina	141,867,000	75.66
Georgia	377,094,000	122.23
Florida	343,396,000	205.63
Kentucky	444,625,000	152.27
Tennessee	480,57[illegible],000	166.12
Alabama	263,618,000	91.06
Mississippi	181,833,000	89.88
Arkansas	163,387,000	79.78
Louisiana	419,011,000	196.53
Texas	1,300,720,000	210.75
Total	$5,488,152,000	$150.53
United States, excluding the South -	$43,791,524,000	$471.90

These figures do not include mutual savings banks as there are no institutions of this type in the South. An inclusion of their deposits, amounting to more than $10,000,000,000 for the nation, would show an even more unfavorable condition in the South.

It is not contended that outside capital is not available for the development of southern resources and industries. Practically all large-scale development of this type has been financed by outside capital but at the expense of a constant drain upon the financial resources of the South in the form of dividends or interest paid elsewhere. The result of this situation is strikingly evidenced by the federal income tax returns for the year of 1934. The average per capita tax for the 13 southern states was $1.28, ranging from $3.53 in Florida to $0.24 in Mississippi. When this is compared to the $5.09 average for the rest of the states of the union, the position of the South is clearly shown.

Interest rates on S. securities are higher than on Northern' (Because S. banks acts as brokers for outside bankers)

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(Preliminary draft - not for publication)

Section 15

USE OF NATURAL RESOURCES

In terms of human and natural resources the South ranks high among the most favorably equipped regions of the nation. But its potentialities either lie unused or, all too frequently and more tragically, are being frittered away. This condition, as has been pointed out, is plainly reflected in the low per capita income of both farm and industrial workers, by the lowest living standards of the country, and by the general educational and cultural lag which characterize the South. The reason for this might be summed up in the word waste - waste of human energies and natural resources. In disecting and analyzing this waste it becomes apparent that its explanation is characterized by three phases; viz., (1) wasteful use by the southern people of their own energies and endowments, (2) the disuse of the region's potentialities and (3) exploitation by absentee ownership and control with the sole aim of gaining for itself, with no regard for the social and economic welfare of a region, the largest possible return for its investments and holdings in the South.

The oldest and by far the most important of these phases of waste is that practiced by the southern people themselves. Exhausted forest resources and eroded and exhausted lands are evidence of this. The American people, (and southerners above all,) until fairly recent decades seemed to have no idea of the value of forests. Trees were obstacles in man's path, something to be girdled, chopped, burned, or disposed of in any manner that seemed feasible. At one time the yellow pine regions of the South were

suggests omit [illegible]

spoken of and depicted on maps as the "Great Pine Barrens." It is not uncommon in the South today for hunters, both white and colored, to fell a ten-dollar tree for a twenty-five cent "possum. Then again, through many parts of the South, deliberately lighted forest fires are allowed to burn unchecked, killing small trees and harming large ones, driving away or killing game, and consuming the precious forest floor which can check erosion or go to form humus. Such is the disdainful value placed on trees, notwithstanding the fact that lumber and forest products have brought untold millions to the South and can even yet bring more wealth if wisely used.

Over half Southern states have passed laws against setting forest fires. Wannamaker

But waste has not been confined entirely to forest and agricultural resources, for minerals come in for their share of this wasteful economy. This has largely taken the form of a "skimming the cream" policy - anything to secure the best ore, oil or gas with the least effort. Exaggerated room and pillar mining of coal, or failure to work out the pillars as the mines have been abandoned, is an example. Nothing could better illustrate it than the waste of natural gas, an invaluable and irreplaceable mineral resource. In 1935 the nation had a loss and wastage of natural gas (not including wasteage at well-heads) of 479,826,000,000 cubic feet. This was a fifth of the country's gross natural gas production. The Panhandle of Texas alone accounted for 67 percent of the national waste, not counting that part which would have to be attributed to other parts of the South. There are definitely known technological processes which would permit the useful employment of much of this gas had there existed the desire to do so.

The second characteristic phase of waste in the South is to be found not in the manner in which resources are employed, but in the manner in which they are not put to employment to bring about a better economic well-being for the region. The failures in this respect are so many and so extensive, and have been discussed and written about so much that it will suffice to bring to light here an aspect of the situation which has not been so much considered. This is the problem of ownership or control in fee or by lease of many of the South's mineral resources. Qualitatively there is evidence that such holdings are extensive. Of what good to the area are its physical endowments when these resources are held by remote interests who are holding them until such times as they choose to move in and start exploitation? If perchance they should receive a purchase offer they are in a position to name the price.

An example of this may be seen in the iron resources of Alabama. In that state a well-known commercial reporting agency in its reports of corporate holdings, states that one concern owns over half the high-grade iron reserves of the state. The ownership and control of the rest of Alabama's known reserves of iron can be readily determined. There is little likelihood of a new and independent large scale iron and steel industry springing up in the Alabama mining region because under such conditions a new industry could hardly obtain control of enough iron reserves to assure it of a sustained source of supply over a period of years, even though an adequate supply is now held unused by the existing companies.

This is true, and is one of the factors? but This is more because market is not now good [illegible]

The fact to be brought out (though this may not be a good example) is the buying up by outside interests to keep idle to prevent competition with their business elsewhere.
Forman

And finally we have the third phase of wastage which again results from absentee ownership and control, but in somewhat the opposite manner from the preceding phase. In this third case, also, absentee-owned industries exploit absentee-owned resources, but this exploitation is significant in the manner in which it not only neglects and wastes southern labor from a social point of view, but creates economic waste by its very methods. For instance, in mining and shipping away from the South in a raw or semi-finished form many of the region's mineral resources, the South frequently receives nothing except the wages of unskilled or semi-skilled laborers. The total benefits of carrying these things through to a finished stage are not allowed to accrue to Southerners, but to workers often far removed. On the other hand, when the southern worker buys the finished product, included in the charge to him is all the wasteful cross-handling it took to make the circuit to him as a consumer.

Such a procedure is commonplace, and examples could be cited without end. For instance, North Carolina and Tennessee produce 39 percent of the total ground feldspar of the nation, but one can look in vain in the South for any important tile, glass, enamel, insulator, and scouring soap industries which use the spar. Georgia produces 66 percent of the kaolin output of the country and South Carolina 20 percent, but industries of those states use little of this clay. Kentucky is a ranking fluorspar producer but ships practically its entire production out of the South. Similar examples could be cited for bauxite, zinc, lead, mica, tripoli, ocher, manganese, copper, salt, quartz, sulphur and others.

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 16

OWNERSHIP OF INDUSTRY

Although industry does not occupy the same relative position in the South that it does in the rest of the country, there has been a constant increase of industrialization during the first three decades of this century. The ownership and control of this industry is, however, largely outside the South.

The utilities in the South are almost completely controlled by outside interests. All the major railroad systems are owned and controlled elsewhere. Even the state-owned Western and Atlantic Railroad built and owned by the State of Georgia, is leased and controlled outside the South. Thus the transportation of both agricultural and industrial goods of the South is beyond its control.

All of the great utility holding company systems whose operating companies furnish the light, heat, and power for southern homes and industries are directed, managed, and owned by outside interests. Likewise the transmission and distribution of natural gas, one of the South's great natural assets, is almost completely in the hands of remote financial institutions.

In the field of the heavy industries we find the same predominant role of outside capital and the same absence of local control. The rich deposits of iron ore, coal, and limestone exist closely together around Birmingham in greater quantities than are known to exist together anywhere else in the world. This combination is ideal for the production of iron and steel. These resources are, however, owned and controlled by two companies, one a subsidiary of the United States Steel Corporation and the other a subsidiary

, this co does not own an important part of Ala Steel now. Col Person

of the Republic Steel Corporation. The two holding companies are located in the North and have their major operation units in the Pittsburgh district. The price of steel in Birmingham is based on the price of steel at Pittsburgh. This has resulted in attracting steel fabricators to the Pittsburgh area rather than the Birmingham area, despite the natural advantages of the latter. When the price is so artificially controlled the South is effectively deprived of its natural advantages.

Pittsburgh plus price recently abolished by the steel co, Gen. Person

Question is why is it not still artificially control the price? Goldsmith

Effect will take time, but will encourage fabricators to locate in S. Gen Person

Similar conditions exist with regard to the production of aluminum from bauxite and the extraction of zinc. Practically all important deposits of zinc ore in the South are owned elsewhere. The principal zinc mining company of the Southeast is a subsidiary of a company completely owned and controlled outside of the area of its operation.

The South's resources of zinc ore and the South's consumption of zinc paints and zinc-processed, galvanized ironware and pipes are separates by a long northern detour. The zinc ore is shipped away and processed in other parts of the country and the South gets it back only after paying the two-way haul.

Over 99 percent of the sulphur produced in the United States comes from Texas and Louisiana. Two extraction companies control practically the entire production. Both are owned and controlled outside the South; one has fifteen directors and the other nine, but only one member of each board resides in the South.

Almost without exception, the plants producing basic chemical products are absentee owned and controlled, and dominated by financial interest located outside of the South. The Allied Chemical and Dye Corporation, a giant international chemical holding company, produces through an American subsidiary, located at Hopewell, Virginia, a synthetic nitrate of soda, -- an important ingredient both for industry and agriculture. Another subsidiary, the Solvay Process Company located at Baton Rouge, Louisiana, produces soda ash and caustic soda in various forms. Through control of patent rights and by leasing agreements, Allied Chemical occupies a important ~~decisive~~ position in the southern coking industry.

Largest coking Co in Birmingham is Southern owned. Gen Persons

Another vital ingredient of fertilizer, ammonium sulphate, is distributed in the South through a subsidiary of the Allied Chemical and Dye Corporation. The South uses annually approximately two-thirds of the nation's output of fertilizer and the monopoly or outside control of any vital element of this fertilizer has a very direct bearing on the economy of the South.

The South owns a greater share of its light industry than that called "heavy," but even in the principal industrial activity of the South, textile manufacture, many of the largest and most dominating mills are owned elsewhere. In fact in many cases these mills have merely been transferred from a northern location.

With respect to artificial silk or rayon products the outside control is most important. A striking example is the American Bemberg Corporation with large mills in Tennessee. The patents and processes used by this company are exclusively owned in Germany. Of the company's fourteen directors, five are German, three are Dutch, and four Americans, resident in New York.

If we didn't get Northern capital, S. resources wouldn't be developed. Gen Persons
On other hand, shows why should get back some federal money, e.g. for educ. etc. (Texas).

With some independent source of credits, (fed govt or otherwise) it could develop its resources differently from the way Northern capital develops them. Forman.

REPORT ON ECONOMIC CONDITIONS OF THE SOUTH

(Preliminary draft - not for publication)

Section 17

NEW INDUSTRIES

Many eminent Southerners have long argued that their region could never have a balanced economy until it built up a thriving industry within its own borders. Within the last decade, southern industries have been developed with considerable rapidity - in some cases under the unhealthy stimulation of artificial inducements, such as tax exemptions, free land, and sub-standard wages.

The prospects for further sound industrialization are, however, surprisingly optimistic. An objective balance sheet would show, on the asset side, many natural advantages which cannot be paralleled anywhere else in America; while most of the South's liabilities are man-made, artificial obstacles to industrialization, which it is by no means impossible to remove.

Among the South's assets should be listed:

1. Vast stores of natural resources, ranging from timber to kaolin, and from bauxite to sulphur.

2. Ample power resources, including water, coal, oil and natural gas.

3. Extensive railroads and growing networks of water and air transportation facilities.

4. A climate which makes it possible for factories to run the year around without artificial heat, and which insures out-door industries against serious weather interruptions.

5. The nation's largest undeveloped market.

These factors have resulted in the last few years in the establishment of several new industries which promise a widespread development. The most notable, perhaps, has been the manufacture of paper from fast-growing southern pines. So far most of this has been wrapping or Kraft paper, but lately great strides have been made in the production of newsprint from slash pine. A somewhat similar source of cellulose, the waste stalks of cane and corn, has not yet been fully developed.

Recent experiments on a commercial scale at Laurel, Miss., have indicated that it may be possible to manufacture a high grade of starch from sweet potatoes, for use in sizing textiles and making adhesives. An industry of this type would be particularly desirable, since it would provide a new source of income for southern farmers and would not compete with any established business; virtually all starch of this variety now is imported.

with Federal funds

Materials for making paint, ranging from naval stores to pigments, are available in the South - and a glance at southern farm houses shows that no other commodity is more badly needed in the region. The basis for a similar industry has been laid by the successful growth of tung trees, which supply an oil suitable for the manufacture of varnish.

The development of a native pottery industry, based on high-grade clays and kaolin, already is well under way; and these same materials might serve as the foundation for a sweeping expansion of brick and terra cotta manufacture.

Such examples might be multiplied almost indefinitely. It is evident, however, that the South has an ample basis for the development of sound native industries; it has no need to lure "run-away industries" from other regions through offering such inducements as subsidies and cheap labor.

On the other side of the ledger, in addition to the difficulties of credit, one of the gravest obstacles to the South's development has been unfair freight rates. Existing freight schedules, based upon conditions which have long since disappeared, put the southern manufacturer at a severe disadvantage in competition with rivals in other sections. The discrimination is particularly severe on shipments from the South into the northern states east of the Mississippi River. This section contains 51 percent of the nation's population, and a much greater share of its purchasing power: it is by far the most important market on the continent. Yet the average South Eastern southern manufacturer who wants to reach this market is under a relative disadvantage of about 39 percent in freight rates, in comparison with manufacturers who ship their goods entirely within the northeastern area. In S.W. situation much worse (about 75 pc)

Such a handicap not only shuts the southern industrialist off from his best market; it also forces him to charge higher prices in his own neighborhood, since he can seldom achieve the economies of mass-production so long as his sales and output are limited by this artificial barrier.

One of the classic examples of the results of such freight rate discrimination is the zinc industry. The artificial rate structure makes it possible to ship southern zinc ore to the North, where it is refined, used to coat northern steel, and then shipped back into the South in the form of zinc-steel roofing. Under fair freight rates, the zinc could be completely processed near the mine, thus eliminating uneconomic cross-hauling.

An equally serious - and equally artificial - barrier to the South's economic development has been the nation's traditional high tariff policy. Insert amt. South has pd. Wannamaker Its effects are too well known to need extended discussion: in brief, the South has been forced for generations to sell its agricultural products on an unprotected world market, and to buy its manufactured goods at prices artificially propped up by high tariffs.

Moreover, by curtailing imports, the tariff has curtailed the ability of foreign countries to buy American cotton and other agricultural exports. Such trade restrictions have hurt the South more than any other section, because the two great cash crops of the South - cotton and tobacco - are more dependent on foreign sales than any other major agricultural product.

The future usefulness of southern resources, and the future possibilities of the South as a market for goods produced elsewhere in the country, depends upon the reduction of these artificial barriers.

Spain with highest tariff had lowest wage levels }
Eng " lowest " " highest }
South buys in highly protected market & sells in a world market, The new trade agreements are the first effective policy undertaken to relieve this situation.
Even Hamilton mentioned the ill effects of high tariffs on agriculture. Carl White

Need of industrial research, lacking in South. Crosby, Miss.
Wannamaker suggests use for research of the million $ in treasury left from issuance during war of money without gold backing
More concrete emphasis on tariff. Smith of Texas
Call attention now to the present tendency to cut wages drastically in some industries in anticipation of wage bottom being fixed. L. R. Mason

1938

CHARTS PREPARED FOR SOUTHERN CONFERENCE

Miss Anderson gave to Mrs. Settle of Kentucky the following charts:

1. Large map showing occupational distribution (by race).
2. Bar chart showing occupational distribution of women.

Miss Anderson gave to Miss Dowd of Alabama the following charts:

1. The South and Minimum Wage.
2. Maximum hours set by State laws.
3. Cost of living at maintenance level (with picture above).
4. Farm tenancy (with State flowers).
5. Value of farm lands and buildings (with picture at back).
6. Resources of 13 Southern States.

Charts being returned to Washington by Mrs. Walker:

1. Median earnings in Southern States.
2. History of Minimum Wage Legislation.
3. Per cent of non-relief families receiving less than $1,000 a year.
4. Per capita personal income.
5. Population and income in United States and 13 Southern States.

MRS. WILLIAM T. GAYLE JR.
2047 CHELSEA CIRCLE N. E.
ATLANTA, GEORGIA

Miss Anderson

August 24, 1940

WOMEN'S BUREAU.
DEPARTMENT OF LABOR
AUG 26 1940

RECEIVED
OFFICE OF SECRETARY OF LABOR
AUG 26 1940
AM PM
9|10|11|12|1|2|3|4|5|6

Miss Frances Perkins
Secretary of Labor
Washington, D.C.

Dear Miss Perkins:

It is my privilege to send to you the Statement of one hundred southern women who deplore the virtual disfranchisement of countless women in those states which still require payment of a poll tax before voting.

These women, representative of many fields of activity and interest, are outstanding leaders in clubs and organizations in the poll-taxed states.

It is fitting that their expression of deep concern should come to the Congress on an anniversary marking the end of one great struggle to extend suffrage -- the twentieth anniversary of the Woman's Suffrage Amendment.

The expression of these thoughtful and influential women indicates the great sentiment rapidly developing in these states for the abolition of the poll tax.

Very sincerely yours,

Margot Gayle

Mrs. William T. Gayle, Jr.

Statement of One Hundred Southern Women

ON THE TWENTIETH ANNIVERSARY OF THE NINETEENTH AMENDMENT TO THE CONSTITUTION OF THE UNITED STATES

Twenty years ago today, the right to vote was secured to the women of this nation through the Nineteenth Amendment to the Constitution of the United States. For years, America's women worked with devotion and courage toward this goal. We now realize that the victory was only partly won. We are gravely concerned that twenty years later countless thousands of women are still, in effect, disfranchised in those southern states which require payment of a poll tax before voting.

We, the undersigned women of these poll-taxed states, are proud of our states and seek through the removal of this barrier a fuller development of the democratic process. Therefore, we call on the Congress, on this anniversary of the first great step toward woman suffrage, for legislation which will obviate for voting in federal elections the requirement of payment of a poll tax.

Cornelia S. Adair
Cornelia Adair, Richmond, Virginia

Mrs. Theodore F. Adams
Mrs. Theodore F. Adams, Richmond, Virginia

Ruth A. Allen
Prof. Ruth A. Allen, Austin, Texas

Jessie Daniel Ames
Mrs. Jessie Daniel Ames, Decatur, Georgia

Eleanor Copenhaver Anderson
Mrs. Sherwood Anderson, Marion, Virginia

Mary Sanford Ault
Mrs. Frederick Ault, Knoxville, Tennessee

Louise H Ballerstedt
Louise Ballerstedt, Elgin, Texas

Mary C Barker
Mary C. Barker, Atlanta, Georgia

Gladys Boone
Gladys Boone, Sweetbriar, Virginia

Mrs. Carl Brinkman
Mrs. Carl Brinkman, Lucedale, Mississippi

Mrs. Ralph Butler
Mrs. Ralph Butler, Dallas, Georgia

Nuvella Calvin
Mrs. D. B. Calvin, Galveston, Texas

Mayola S. Center
Mrs. Charles D. Center, College Park, Georgia

Louise O. Charlton
Judge Louise O. Charlton, Birmingham, Alabama

Mrs. James H. Chesnutt
Mrs. James H. Chesnutt, Hot Springs, Arkansas

Mrs. Lawrence Coe
Mrs. Lawrence Coe, Memphis, Tennessee

Lillian W. Collier
Mrs. Jud Collier, Mumford, Texas

Leny M. Comfort
Mrs. Dan Comfort, Durant, Mississippi

Clara C Conroy
Mrs. Clara Conroy, Albany, Georgia

Mrs. J. C. Cox
Mrs. J. C. Cox, Chattanooga, Tennessee

Mrs. Henry W. Decker
Mrs. Henry W. Decker, Richmond, Virginia

Martha Dodd
Martha Dodd, Round Hill, Virginia

Mrs Wm. E. Dodd Jr.
Mrs. William E. Dodd, Jr., Round Hill, Virginia

Mollie Dowd
Mollie Dowd, Birmingham, Alabama

Virginia F. Durr
Mrs. Clifford Judkins Durr, Birmingham, Alabama

Josephine F. Eddy
Josephine F. Eddy, Montevallo, Alabama

Mary A. Elliott
Mary A. Elliott, Knoxville, Tennessee

Hallie Farmer
Dr. Hallie Farmer, Montevallo, Alabama

Mrs. Laura Davis Fitzhugh
Mrs. Laura Davis Fitzhugh, Augusta, Arkansas

Bertha M. Fuller
Mrs. J. H. Fuller, Little Rock, Arkansas

Lucy Gage
Lucy Gage, Nashville, Tennessee

Betty Gray Gibson
Mrs. Stuart Gibson, Richmond, Virginia

Mrs. E. H. Green
Mrs. E. H. Green, Cleveland, Mississippi

Evelyn Hanna
Evelyn Hanna, Thomaston, Georgia

Mrs. John M. Hanna
Mrs. John M. Hanna, Dallas, Texas

Lulu Daniel Hardy
Mrs. Lulu Daniel Hardy, Gulfport, Mississippi

Julia Collier Harris
Julia Collier Harris, Chattanooga, Tennessee

Latham Hatcher
Latham Hatcher, Richmond, Virginia

Katharine H. Hawes
Katharine H. Hawes, Richmond, Virginia

Mrs. Albert E. Hill
Mrs. Albert E. Hill, Nashville, Tennessee

Mrs. Claude Hill
Mrs. Claude Hill, Austin, Texas

Mrs. William H. Hogue
Mrs. Olivia Fuller Hogue, Houston, Texas

Sarah H. Hood
Mrs. Sarah H. Hood, Knoxville, Tennessee

Gertrude Horsley
Mrs. Henderson Horsley, Kingsport, Tennessee

Elizabeth Hughes
Elizabeth Hughes, Houston, Texas

Mabel Williams Hughes
Mrs. L. W. Hughes, Arlington, Tennessee

Ellen Atwood Ives
Mrs. Stephen B. Ives, Atlanta, Georgia

Mrs. Louis Kaufman
Mrs. Louis Kaufman, Montgomery, Alabama

Mrs. Charles B Kennamer Sr.
Mrs. Charles B. Kennamer, Sr., Montgomery, Alabama

Mrs. C. D. Killebrew
Mrs. C. D. Killebrew, Fairhope, Alabama

Stella McGehee Landis
Mrs. James M. Landis, Mississippi

[illegible] Lanham
Mrs. Edwin Lanham, Weatherford, Texas

Helen M. Lilienthal
Mrs. David E. Lilienthal, Norris, Tennessee

Katherine D. Lindsay
Mrs. Harvey L. Lindsay, Norfolk, Virginia

Jean MacGillivray
Jean MacGillivray, Jackson, Mississippi

Mrs Delbert M. Mann
Mrs. Delbert M. Mann, Nashville, Tennessee

Mrs. Julius Mark
Mrs. Julius Mark, Nashville, Tennessee

Mrs. John D. Martin
Mrs. John D. Martin, Tullahoma, Tennessee

Mrs. L. F. Martin
Mrs. L. F. Martin, Statesboro, Georgia

Lucy R. Mason
Lucy Randolph Mason, Richmond, Virginia

Mrs. Devereaux McClatchey Jr.
Mrs. Devereaux F. McClatchey, Jr., Atlanta, Georgia

Mrs. W. P. McDermott
Mrs. W. P. McDermott, Little Rock, Arkansas

Marianne E. Meade
Marianne E. Meade, Richmond, Virginia

Mrs. Wm Mitch
Mrs. William Mitch, Birmingham, Alabama

Edwina Mitchell
Mrs. Edwina Mitchell, Montgomery, Alabama

Myra Page
Myra Page, Norfolk, Virginia

Medora F. Perkerson
Medora Field Perkerson, Atlanta, Georgia

Thelma Stevens
Thelma Stevens, Nashville, Tenn.

Anna Perlitz
Anna Perlitz, San Antonio, Texas

Mary Porter
Mary Porter, Newport, Arkansas

Martha Ragland
Mrs. Tom Ragland, Chattanooga, Tennessee

Mrs. Homer P. Rainey
Mrs. Homer P. Rainey, Austin, Texas

Mrs. Arthur Raper
Mrs. Arthur Raper, Decatur, Georgia

Evelyn Raskin
Prof. Evelyn Raskin, Lynchburg, Virginia

Charlotte M. Rhorer
Mrs. H. L. Rhorer, Atlanta, Georgia

Mrs. C. E. Rogers
Mrs. C. E. Rogers, Johnson City, Tennessee

Mrs Wm Cory Ross
Mrs. William Cory Ross, Knoxville, Tennessee

Mary U. Rothrock
Mary U. Rothrock, Knoxville, Tennessee

Constance Rumbough
Constance Rumbough, Jackson, Mississippi

Ina Scherrebeck
Ina Scherrebeck, Nashville, Tennessee

Elizabeth Cecil Scott
Mrs. Frederic R. Scott, Richmond, Virginia

Mirth H. Sherer
Mrs. C. R. Sherer, Fort Worth, Texas

Lillian E. Smith
Lillian E. Smith, Clayton, Georgia

Paula Snelling
Paula Snelling, Clayton, Georgia

Mrs. Alex W. Spence
Mrs. Alex W. Spence, Dallas, Texas

Mrs. Frank W. Spencer
Mrs. Frank W. Spencer, Savannah, Georgia

Mrs. Carl V. Stafford
Mrs. Carl V. Stafford, Knoxville, Tennessee

Mrs. A. D. Stewart
Mrs. A. D. Stewart, Jackson, Mississippi

Olive M. Stone
Prof. Olive M. Stone, Richmond, Virginia

Willie Hughes Tarpley
Mrs. Willie Hughes Tarpley, Birmingham, Alabama

Mrs. Angus M. Taylor
Mrs. Angus M. Taylor, Birmingham, Alabama

Lucinda Lee Terry
Lucinda Lee Terry, Roanoke, Virginia

Mrs. Albert Thomas
Mrs. Albert Thomas, Auburn, Alabama

Mrs J. D. Thomas
Mrs. John D. Thomas, Atlanta, Georgia

Mrs. M. E. Tilly
Mrs. M. E. Tilly, Atlanta, Georgia

Mrs. R. L. Turman
Mrs. R. L. Turman, Atlanta, Georgia

Mrs. L. O. Turner
Mrs. L. O. Turner, Atlanta, Georgia

Bethann F. Van Ness
Mrs. Noble Van Ness, Nashville, Tennessee

Florence van Sickler
Florence van Sickler, Atlanta, Georgia

May Cravath Wharton
Dr. May C. Wharton, Pleasant Hill, Tennessee

Josephine Wilkins, Atlanta, Georgia

Margaret D Yates
Margaret D. Yates, Fort Worth, Texas

August 26, 1940

The National Emergency Council will be glad to furnish additional copies of the Report on Economic Conditions of the South through its division the

UNITED STATES INFORMATION SERVICE
1405 G Street NW.
Washington, D.C.

Copy

July 8, 1938

Memorandum to Clark Forman

From Mary Anderson, Director of Women's Bureau
Mary Elizabeth Pidgeon, Chief of Research Division

Subject Report on Economic Conditions of the South, Section 11

You and your staff have done an excellent job in the coordination of material from many sources, a difficult task. For the most part the information we were able to furnish you was used to the best advantage, in Section 11 and some of it in Section 7. We are making one or two brief suggestions on the attached sheet, which we hope may be helpful to you.

Economic Conditions of the South

Section 11
Labor of Women and Children

Suggest change of opening paragraphs to read somewhat as follows:

> Several Southern States are among these in which the largest proportions of the women in the population are in gainful work, and child labor is more prevalent in the South than in any other section of the Nation.
>
> These workers operate under less stringent statutory limitations than elsewhere. Moreover, low wages for men in the South frequently force upon their children as well as their wives, sisters and daughters a considerable part of the burden of family support.

Reasons for this suggestion

1. Women at work in the South are only about 30 percent of all employed women in the country, and the earlier statement is not quite clear. (See data in our earlier memorandum.)

2. The point about responsibilities of women for family support is made nowhere else in the report, though we are made aware of this situation with increasing frequency.

3. As stated before, it looks as if we opposed the employment of women, and as that is occurring in some countries we want to be careful not to suggest it.

Page 4 in paragraph on homework, to take care of some of the suggestions made in the conference, the following sentence might be added (could stop at comma if too long for space):

> The indications are that in recent years this type of industrial work is tending to move more extensively into the South, and the exploitation incident to it should be early avoided.

1938

Report on
ECONOMIC CONDITIONS OF THE SOUTH

Prepared for
THE PRESIDENT
by
THE NATIONAL EMERGENCY COUNCIL

Can obtain copies from U.S. Inf. Service
1405 G St., N.W. Wash. D.C.

REQUEST FOR REPORT

THE WHITE HOUSE,
Washington, June 22, 1938.

MY DEAR MR. MELLETT: Discussions in Congress and elsewhere in connection with legislation affecting the economic welfare of the Nation have served to point out the differences in the problems and needs of the different sections of the country and have indicated the advisability of a clear and concise statement of these needs and problems in a form readily available, not only to the Members of Congress, but to the public generally.

Attention has recently been focused particularly upon the South in connection with the wages and hours bill, and I should like the National Emergency Council to undertake the preparation of such a statement of the problems and needs of the South. In preparing this statement I suggest that you call freely upon the various governmental departments and administrative agencies for information as to matters with which they are especially acquainted, and also that you request the assistance of southerners well known for their interest in the South and familiarity with its problems.

The outcome of this undertaking may indicate the advisability of similar studies with reference to other sections of the country.

Very sincerely,

(Signed) FRANKLIN D. ROOSEVELT.

Hon. LOWELL MELLETT,
Executive Director,
National Emergency Council.

REPORT TO THE PRESIDENT
ON
THE ECONOMIC CONDITIONS OF THE SOUTH

THE PRESIDENT'S LETTER

To the Members of the Conference on Economic Conditions in the South:

No purpose is closer to my heart at this moment than that which caused me to call you to Washington. That purpose is to obtain a statement—or perhaps, I should say a restatement as of today—of the economic conditions of the South, a picture of the South in relation to the rest of the country, in order that we may do something about it; in order that we may not only carry forward the work that has been begun toward the rehabilitation of the South, but that the program of such work may be expanded in the directions that this new presentation shall indicate.

My intimate interest in all that concerns the South is, I believe, known to all of you; but this interest is far more than a sentimental attachment born of a considerable residence in your section and of close personal friendship for so many of your people. It proceeds even more from my feeling of responsibility toward the whole Nation. It is my conviction that the South presents right now the Nation's No. 1 economic problem—the Nation's problem, not merely the South's. For we have an economic unbalance in the Nation as a whole, due to this very condition of the South.

It is an unbalance that can and must be righted, for the sake of the South and of the Nation.

Without going into the long history of how this situation came to be—the long and ironic history of the despoiling of this truly American section of the country's population—suffice it for the immediate purpose to get a clear perspective of the task that is presented to us. That task embraces the wasted or neglected resources of land and water, the abuses suffered by the soil, the need for cheap fertilizer and cheap power; the problems presented by the population itself—a population still holding the great heritages of King's Mountain and Shiloh—the problems presented by the South's capital resources and the absentee ownership of those resources, and problems growing out of the new industrial era and, again, of absentee ownership of the new industries. There is the problem of labor and employment in the South and the related problem of protecting women and children in this field. There is the problem of farm ownership, of which farm tenantry is a part, and of farm income. There are questions of taxation, of education, of housing, and of health.

More and more definitely in recent years those in the South who have sought selflessly to evaluate the elements constituting the general problem, have come to agree on certain basic factors. I have asked Mr. Mellett to present for your consideration a statement of these factors as prepared by various departments of the Government. I ask you to consider this statement critically, in the light of your own general or specific knowledge, in order that it may be made representative of the South's own best thought and that it may be presented to Congress and the public as such.

I had hoped to attend your meeting and listen to your discussions. Unhappily, other pressing work makes this impossible. Please accept my sincere regret that I cannot be with you, and be assured that I anticipate with deep interest the result of your labors.

FRANKLIN D. ROOSEVELT.

THE WHITE HOUSE,
Washington, D. C., July 5, 1938.

LETTER OF TRANSMITTAL

JULY 25, 1938.

TO THE PRESIDENT:

In response to your request of June 22, 1938, there is transmitted herewith a report on the economic problems of the South.

The report presents in only a small degree the manifold assets and advantages possessed by the South, being concerned primarily not with what the South has, but with what the South needs.

Preparation of the report was aided by the counsel of an advisory committee of southern citizens known for their interest in the region and their familiarity with its problems. It is their expressed hope and belief that the South will benefit from a thorough examination of the factors that have produced the present economic unbalance, hurtful not only to their section but to the country as a whole. This committee included:

> Dr. B. F. Ashe, president, University of Miami, Miami, Fla.; Governor Carl Bailey, Little Rock, Ark.; Barry Bingham, publisher, Louisville Courier Journal, Louisville, Ky.; W. B. Bizzell, president, State University, Norman, Okla.; Col. P. H. Callahan, president, Louisville Varnish Co.; Louisville, Ky.; L. O. Crosby, lumberman, Picayune, Miss.; Judge Blanton Fortson, judge, superior court, Athens, Ga.; Frank Graham, president, University of North Carolina, Chapel Hill, N. C.; Attorney James Hammond, past president, Chamber of Commerce, Columbia, S. C.; Col. Leroy Hodges, State comptroller, Richmond, Va.; Miss Lucy Randolph Mason, C. I. O. representative, Atlanta, Ga.; H. L. Mitchell, secretary-treasurer, Southern Tenant Farmers Union, Memphis, Tenn.; Gen. John C. Persons, president, First National Bank, Birmingham, Ala.; Prof. Chas. W. Pipkin, Louisiana State University, Baton Rouge, La.; Paul Poynter, publisher, St. Petersburg Times, St. Petersburg, Fla.; J. H. Reynolds, president, Hendricks College, Conway, Ark.; Robert J. Smith, vice president, Braniff Airways, Dallas, Tex.; S. L. Smith, Peabody College, Nashville, Tenn.; Alexander Speer, former president, Virginia Public Service Co., Alexandria, Va.; Joseph G. Tillman, planter, Statesboro, Ga.; J. Skottowe Wannamaker, president, American Cotton Association, St. Matthews, S. C.; Carl White, A. F. of L., Port Arthur, Tex.

The various departments and administrative agencies were called on for information. Factual statements were checked by the Central Statistical Board, and many men and women in the Government contributed their knowledge and efforts. The actual drafting of the 15 sections of the report was the work of southerners, intimately acquainted with their own region and vitally concerned in its welfare.

As used in this report, the term "the Southeast" includes the States of Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana and Arkansas; the "Southwest" means Oklahoma and Texas, and "The South" covers all the 13 States.

Effort has been made to meet your desire for a concise statement. The report therefore does not attempt to be exhaustive. On any one of the 15 topics discussed much more extensive treatment can be found in official Government reports or in studies that have been made by educational institutions and individuals.

One thing appears to be made clear when the principal difficulties faced by the South are brought into perspective and when what the South has to offer the Nation is laid alongside what the South needs for its own people; that is that the economic problems of the South are not beyond the power of men to solve. Another thing made clear, however, is that there is no simple solution. The solution must be part political, with the Federal Government participating along with State, county, city, town, and township government. But there must be participation also by industry, business and schools—and by citizens, South and North.

The example given by the men named above in lending their time and their patient consideration to the material condensed into this brief report seems to assure that the citizens of the South do not hesitate to face the facts of the present situation. This, in turn, would seem to assure—to use your own language—that something will be done about it.

Lowell Mellett,
The Executive Director,
National Emergency Council.

SECTIONS OF REPORT

1. Economic resources.
2. Soil.
3. Water.
4. Population.
5. Private and public income.
6. Education.
7. Health.
8. Housing.
9. Labor.
10. Women and children.
11. Ownership and use of land.
12. Credit.
13. Use of natural resources.
14. Industry.
15. Purchasing power.

REPORT TO THE PRESIDENT

ON

THE ECONOMIC CONDITIONS OF THE SOUTH

SECTION 1

ECONOMIC RESOURCES

In the South, as elsewhere, the two most important economic endowments are its people and its physical resources. The 1937 census estimates showed that the 13 Southern States had more than 36 million persons. While this population is descended from the peoples of virtually every country of the world, a larger percentage derives from early American stock than that of any other region in the United States; 97.8 percent, according to the last census, was native born; 71 percent white, and 29 percent colored.

The birth rate in the South exceeds that of any other region, and the excess of births over deaths makes the South the most fertile source for replenishing the population of the United States. At a time when the population of the country as a whole is becoming stationary, there is a continuous stream of people leaving the South to work in other parts of the Nation—greatly in excess of the corresponding migration to the South.

The South is a huge crescent embracing 552 million acres in 13 States from Virginia on the east to Texas on the west. It has widely varying topographic conditions—vast prairies, wooded plains, fertile valleys, and the highest mountains in the eastern United States.

The transportation facilities of the South are, for the most part, excellent. It is covered by rail lines which connect the interior with ports and give easy access to other regions. Both the Mississippi and the Ohio Rivers' navigation facilities serve the South. The Warrior-Tombigbee system taps the important industrial region around Birmingham, while the Tennessee River system, now being developed by the Tennessee Valley Authority, will bring water transportation to the very heart of the Southeast. The highways of the South are well advanced. Roads are built cheaply and are usable in all seasons. The region is well served by air lines. Bordered by both the Atlantic and the Gulf, the South has ideal harbors and many fine ports. Trade with Europe has been important for three centuries. Across the Gulf and Caribbean the South can expect further trade development.

The South has been richly endowed with physical resources. No other region offers such diversity of climate and soil. With a climate ranging from temperate to subtropical, nearly half of that part of the country where there is a frostless growing season for more than 6 months of the year is in the South. Throughout almost the entire South there is ample annual rainfall and little artificial irrigation is required.

The soils of the South are the most widely varied of the Nation. Alabama, a typical southern State, has 7 major types and almost 300 soil subtypes. These soils permit the growing of a wide variety of products: cotton, tobacco, grains, fruits, melons, vegetables, potatoes, hay, nuts, sugar cane, and hemp. The South leads the world in production of cotton and tobacco.

Soil and climate combine to give it forests of many kinds. With 40 percent of the Nation's forests, the South has found its woodlands second only to cotton as a source of wealth. Approximately 30 percent of the land is still in forests. Despite exploitation and abuse, forests still cover almost 200,000,000 acres, and more than half of the country's second-growth saw timber is in the South.

The region leads the world in naval stores production. Because southern pine reseeds itself and grows rapidly, the South has great potentialities for the production of paper.

The South lags, however, in the production of livestock, despite its wealth of grasslands. Its 20,000,000 cattle amount to less than a third of the total found on American farms; and because of the poor quality of many of them, the value of the annual production of cattle is only one-sixth of the Nation's total.

Fish and game are as plentiful as in any part of the country. Louisiana is our largest raw fur producer.

The South has more than 300 different minerals: Asbestos, asphalt, barite, bauxite, clays, coal, diamonds, feldspar, fluorspar, gypsum, lead, limestone, marble, mercury, phosphate rock, pyrites, salt, sand and gravel, silica, sulphur, zinc, and so on by the scores.

With less than 2 percent of its seams so far tapped, the Southeast contains a fifth of the Nation's soft coal. It mines a full tenth of our iron ore annually, but it produces only slightly more than 7 percent of our pig iron.

The South possesses approximately 27 percent of the Nation's installed hydroelectric generating capacity, although it produces only 21 percent of the electric power actually generated. The region contains 13 percent of the country's undeveloped hydroelectric power.

Nearly two-thirds of the Nation's crude oil is produced in the South, and over two-thirds of our supply of natural gas comes from southern fields. In 1935 the South furnished about half of the country's marble output. Florida and Tennessee produce 97 percent of all our phosphates, and Texas and Louisiana supply over 99 percent of our sulphur.

Commercial fisheries flourish on both the Atlantic and Gulf coasts. Shore fisheries engaged in taking oysters, clams, menhaden, mackerel, sponges, and shrimp are especially important.

In spite of this wealth of population and natural resource, the South is poor in the machinery for converting this wealth to the uses of its people. With 28 percent of the Nation's population, it has only 16 percent of the tangible assets, including factories, machines, and the tools with which people make their living. With more than half the country's farmers, the South has less than a fifth of the farm implements. Despite its coal, oil, gas, and water power, the region uses only 15 percent of the Nation's factory horsepower. Its potentialities have been neglected and its opportunities unrealized.

The paradox of the South is that while it is blessed by Nature with immense wealth, its people as a whole are the poorest in the country. Lacking industries of its own, the South has been forced to trade the richness of its soil, its minerals and forests, and the labor of its people for goods manufactured elsewhere. If the South received such goods in sufficient quantity to meet its needs, it might consider itself adequately paid.

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SECTION 2
SOIL

Nature gave the South good soil. With less than a third of the Nation's area, the South contains more than a third of the Nation's good farming acreage. It has two-thirds of all the land in America receiving a 40-inch annual rainfall or better. It has nearly half of the land on which crops can grow for 6 months without danger of frost.

This heritage has been sadly exploited. Sixty-one percent of all the Nation's land badly damaged by erosion is in the Southern States. An expanse of southern farm land as large as South Carolina has been gullied and washed away; at least 22 million acres of once fertile soil has been ruined beyond repair. Another area the size of Oklahoma and Alabama combined has been seriously damaged by erosion. In addition, the sterile sand and gravel washed off this land has covered over a fertile valley acreage equal in size to Maryland.

There are a number of reasons for this wastage:

Much of the South's land originally was so fertile that it produced crops for many years no matter how carelessly it was farmed. For generations thousands of southern farmers plowed their furrows up and down the slopes, so that each furrow served as a ditch to hasten the run-off of silt-laden water after every rain. While many farmers have now learned the importance of terracing their land or plowing it on the contours, thousands still follow the destructive practices of the past.

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Half of the South's farmers are tenants, many of whom have little interest in preserving soil they do not own.

The South's chief crops are cotton, tobacco, and corn; all of these are inter-tilled crops—the soil is plowed between the rows, so that it is left loose and bare of vegetation.

The top-soil washes away much more swiftly than from land planted to cover crops, such as clover, soybeans, and small grains. Moreover, cotton, tobacco, and corn leave few stalks and leaves to be plowed under in the fall; and as a result the soil constantly loses its humus and its capacity to absorb rainfall.

Even after harvest, southern land is seldom planted to cover crops which would protect it from the winter rains. This increases erosion tenfold.

Southeastern farms are the smallest in the Nation. The operating units average only 71 acres, and nearly one-fourth of them are smaller than 20 acres. A farmer with so little land is forced to plant every foot of it in cash crops; he cannot spare an acre for soil restoring crops or pasture. Under the customary tenancy system, moreover, he has every incentive to plant all his land to crops which will bring in the largest possible immediate cash return. The landlord often encourages him in this destructive practice of cash-cropping.

Training in better agricultural methods, such as planting soil-restoring crops, terracing, contour-plowing, and rotation, has been spreading, but such training is still unavailable to most southern farmers. Annually the South spends considerably more money for fertilizer than for agricultural training through its land-grant colleges, experiment stations, and extension workers.

Forests are one of the best protections against erosion. Their foliage breaks the force of the rain; their roots bind the soil so that it cannot wash away; their fallen leaves form a blanket of vegetable cover which soaks up the water and checks run-off. Yet the South has cut away a large part of its forest, leaving acres of gullied, useless soil. There has been comparatively little effort at systematic reforestation. Overgrazing, too, has resulted in serious erosion throughout the Southwest.

There is a close relationship between this erosion and floods, which recently have been causing a loss to the Nation estimated at about $35,000,000 annually. Rainfall runs off uncovered land much more rapidly than it does from land planted to cover crops or forest. Recent studies indicate that a single acre of typical corn land lost approximately 127,000 more gallons of rainfall in a single year than a similar field planted to grass. Another experiment showed that land sodded in grass lost less than 1 percent of a heavy rain through immediate run-off, while nearby land planted to cotton lost 31 percent. In short, unprotected land not only is in danger of destruction; it also adds materially to the destructive power of the swollen streams into which it drains.

These factors—each one reenforcing all the others—are causing an unparalleled wastage of the South's most valuable asset, its soil. They are steadily cutting down its agricultural income, and steadily adding to its cost of production as compared with other areas of the world which raise the same crops.

For example, it takes quantities of fertilizer to make worn-out, eroded land produce. The South, with only one-fifth of the Nation's income, pays three-fifths of the Nation's fertilizer bill. In 1929 it bought 5½ million tons of commercial fertilizer at a cost of $161,000,000. And although fertilizer performs a valuable and necessary service, it does not restore the soil. For a year or two it may nourish a crop, but the land still produces meagerly and at high cost.

Moreover, southern farmers cannot pile on fertilizer fast enough to put back the essential minerals which are washing out of their land. Each year, about 27,500,000 tons of nitrogen and phosphorus compounds are leached out of southern soil and sent down the rivers to the sea.

The South is losing more than $300,000,000 worth of fertile topsoil through erosion every year. This is not merely a loss of income—it is a loss of irreplaceable capital.

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SECTION 3

WATER

The water resources of the South are abundant. Except on its western fringe, it is generously supplied with waters for municipal use, for electric power, for navigation, and for crop production. Inefficient control or use of these waters has impaired their value in some areas, while in other areas their very superabundance has retarded economic development.

Many communities need better systems of public water supply. In the coastal plain and in the States west of the Mississippi deep wells generally tap water of good quality. The quantity of such underground sources is ample for most communities, but in a number of instances they have been depleted by overdraft and by waste. With the exception of the seaports and older river ports, the larger southern cities and the industrial towns have grown up on the Piedmont and upland regions where groundwaters are more meager. Many are in headwater areas having only small stream-flow during the summer months. Pollution of such streams by cities and towns has impaired public health and has restricted their recreational and industrial use. In these and other areas insufficient provision has been made for waste disposal to keep the streams pure.

In much of the South the combination of heavy rainfall, relatively large stream flow, and favorable topography has made possible great developments of water power. Hydroelectric plants with an installed capacity of approximately 4 million horsepower have been constructed, and the resulting power is of vital importance to the southern economy. In 1937, hydroelectric developments in the Carolinas, Georgia, and Alabama supplied about 85 percent of all power produced for public utilities in that area; whereas hydroelectric power contributed only 37 percent of the total power produced for public utilities in the United States as a whole. Even greater resources lie undeveloped. It is estimated that the potential output of feasible undeveloped power sites in the South would be five times the hydroelectric power actually produced in 1937. These power reserves constitute a rich asset to be utilized as the markets of the South grow.

In the Mississippi Valley, along the Gulf coast and much of the South Atlantic coast, the settlement of the country followed the numerous waterways. Although the significance of river transportation is not generally recognized, it is of growing importance along the Mississippi River, on the Warrior-Tombigbee system, and in the extensive improvements in progress in the Tennessee Basin. An intra-coastal waterway now provides a safe route for vessels of moderate draft along three-fourths of the southern coast. Channel deepening has provided free access for ocean shipping to such inland ports as Richmond, Jacksonville, Beaumont, and Houston.

Most sections receive adequate rainfall for crop production. Only 2,630,000 acres have been improved by irrigation. Of this acreage, some of the more prosperous part is used for vegetable, rice, and citrus-fruit production. In the semiarid western sections, except in the lower Rio Grande Valley, irrigation is in the developmental stage, and its economic possibilities have not been explored fully.

Throughout most of the South an overabundance, not scarcity, of water limits the agricultural use of fertile lands. By means of drainage more than 22,000,000 acres of wet land have been reclaimed. Some of these drained lands are the most fertile in the South, and they are capable of affording a refuge for farmers who have exhausted the eroding upland soils. Additional acreage can be brought to use as fast as the costs of drainage land-conditioning permit. However, a large part of the drained land now lies idle, and in some areas the drainage enterprises are poorly coordinated.

The settlement of wet lands has been retarded in part by malaria. The "fever" takes a heavy annual toll in human life and vitality. It is particularly widespread in those rural areas where drainage is inadequate.

Uncontrolled flood waters likewise impose severe damages on the South. Much of its fertile farming land and many of its important cities lie within reach of floods. Vast sections of the alluvial valley of the Mississippi—31,000 square miles of fertile land with a population of more than 2,000,000—and numerous communities on other southern rivers, are within the danger zone. In the alluvial valley alone three-quarters of a million people were driven from their homes by the flood of 1927. Property damage from this flood was $220,000,000.

To consider another aspect of the South's water resources the once rich fisheries are being depleted, on the one hand, and the wildlife and recreational facilities developed only meagerly on the other. This is true notwithstanding that the shallow sounds along the coasts are important wintering grounds for game varieties of waterfowl and that the sport fishing along the coasts and in the inner sounds is truly notable.

In addition to their value as recreation grounds, these areas are also of tremendous importance as sources of sea food. But their value both as sources of food for the Nation and as a means of livelihood for those engaged in commercial fishing and shellfishing, is threatened by overfishing and, in a few places, by water pollution.

The South is only now becoming aware of the fortune it has in its vast water resources—the value in transportation, power, fish, and game, and in health and recreation. It has just begun to consider the problems involved in conserving this many-sided resource, in curbing the destructive power of water and making it useful.

REPORT TO THE PRESIDENT
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SECTION 4

POPULATION

The population of the South is growing more rapidly by natural increase than that of any other region. Its excess of births over deaths is 10 per thousand, as compared with the national average of 7 per thousand; and already it has the most thickly populated rural area in the United States. Of the 108,600,000 native-born persons in the country in 1930, 28,700,000 were born in the Southeast, all but 4,600,000 in rural districts.

These rural districts have exported one-fourth of their natural increase in sons and daughters. They have supplied their own growth, much of the growth of southern cities, and still have sent great numbers into other sections. Of these southerners born in rural areas, only 17,500,000 live in the locality where they were born, and 3,800,000 have left the South entirely.

This migration has taken from the South many of its ablest people. Nearly half of the eminent scientists born in the South are now living elsewhere. While some of these have been replaced by scientists from other sections of the country, the movement from the South has been much greater than this replacement. The search for wider opportunities than are available in the overcrowded, economically undeveloped southern communities drains away people from every walk of life. About one child of every eight born and educated in Alabama or Mississippi contributes his life's productivity to some other State.

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The expanding southern population likewise has a marked effect on the South's economic standards. There are fewer productive adult workers and more dependents per capita than in other sections of the country. The export of population reflects the failure of the South to provide adequate opportunities for its people.

The largely rural States of the South must support nearly one-third of their population in school, while the industrial States support less than one-fourth. Moreover, in their search for jobs the productive middle-age groups leave the South in the greatest numbers, tending to make the South a land of the very old and the very young. A study of one southern community in 1928 showed that about 30 percent of the households were headed by women past middle age. Since 1930 most of these women, formerly able to live by odd jobs and gardening, have gone on relief. Relief studies in the eastern Cotton Belt have shown recently that 15 percent of the relief households were without a male over 16 years of age and 15 percent more, or 31 percent altogether, were without any employable male. Even if the southern workers were able, therefore, to secure wages equal to those of the North on a per capita basis dollar for dollar, a great gap would still remain between the living standards of southern families and those of other regions.

Recent figures indicate a slowing down of the migration to cities. In general, too, the rural population has increased most rapidly in those sections where the land is poorest. Thus the Appalachian and Ozark areas have shown a rapid increase, while the old black-belt cotton counties and Mississippi Delta counties have shown little or no gains. This has brought about an intensification of the problem of earning a living in the South.

Big families have been growing up on the average southern farm in recent generations. When the children reach maturity, either some of the older ones have to move away and find jobs in industry or trade, or the family farm—already too small—must be cut into smaller farms.

For many years after the War between the States, there was a general tendency to reduce the size of farms, but about 1910 a contrary movement began which partially offset this tendency. Nevertheless, because of the decrease in tillable land, in the older Southern States east of Texas, the farm acreage was actually less in 1930 than in 1860, though the rural population had nearly doubled. In 1930 there were nearly twice as many southern farms less than 20 acres in size as in 1880. These figures indicate serious maladjustment between the people and the land, and a consequent misuse of resources.

In certain sections there has been a tendency to revert to large plantations worked by machinery on an industrial basis. Tractors and gang plows are substituted for men and mules. This method of cutting operating costs also cuts the number of people needed for a given area of land or amount of crop. Farm unemployment constitutes a large proportion of the South's unemployment problem. This tendency is further disarranging the relationship between the people and the land. No longer owners, tenants, or croppers, the workers in these agricultural factories are more nearly day laborers—unskilled workers who can be hired one day and fired the next.

It has been estimated that nearly 3,000,000 young people matured into the 15–25 age group between 1930 and 1935 in the rural districts of 11 southeast States. Barely half a million took places left open by death; about the same number stayed in school; and the increase in number of farms, mostly substistence farms, took care of about a quarter of a million. Remaining are some 1,750,000 who stay in the farm home as casual laborers or as unemployed.

Increasing competition for jobs has also upset the balance of employment between white and Negro. Unemployment among white people has caused them to seek jobs which were traditionally filled only by Negroes in the

South. The field for the employment of Negroes has consequently been further constricted, causing greater migration. The lack of opportunity and the resulting job competition has lowered the living standards of both white and Negro workers in the South.

The population problems of the South—the disproportion of adult workers to dependents, the displacement of agricultural workers by machines, the substitution of white workers in traditionally Negro occupations, the emigration of skilled and educated productive workers—are the most pressing of any America must face. They are not local problems alone. With the South furnishing the basis for the population increase of the Nation, with southern workers coming into other sections of the country in quest of opportunity, with the South's large potential market for the Nation's goods, these problems are national.

REPORT TO THE PRESIDENT
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THE ECONOMIC CONDITIONS OF THE SOUTH

SECTION 5

PRIVATE AND PUBLIC INCOME

The wealth of natural resources in the South—its forests, minerals, and fertile soil—benefit the South only when they can be turned into goods and services which its people need. So far the South has enjoyed relatively little of these benefits, simply because it has not had the money or credit to develop and purchase them.

Ever since the War between the States the South has been the poorest section of the Nation. The richest State in the South ranks lower in per capita income than the poorest State outside the region. In 1937 the average income in the South was $314; in the rest of the country it was $604, or nearly twice as much.

Even in "prosperous" 1929 southern farm people received an average gross income of only $186 a year as compared with $528 for farmers elsewhere. Out of that $186 southern farmers had to pay all their operating expenses—tools, fertilizer, seed, taxes, and interest on debt—so that only a fraction of that sum was left for the purchase of food, clothes, and the decencies of life. It is hardly surprising, therefore, that such ordinary items as automobiles, radios, and books are relatively rare in many southern country areas.

For more than half of the South's farm families—the 53 percent who are tenants without land of their own—incomes are far lower. Many thousands of them are living in poverty comparable to that of the poorest peasants in Europe. A recent study of southern cotton plantations indicated that the average tenant family received an income of only $73 per person for a year's work. Earnings of share croppers ranged from $38 to $87 per person, and an income of $38 annually means only a little more than 10 cents a day.

The South's industrial wages, like its farm income, are the lowest in the United States. In 1937 common labor in 20 important industries got 16 cents an hour less than laborers in other sections received for the same kind of work. Moreover, less than 10 percent of the textile workers are paid more than 52.5 cents an hour, while in the rest of the Nation 25 percent rise above this level. A recent survey of the South disclosed that the average annual wage in industry was only $865 while in the remaining States it averaged $1,219.

In income from dividends and interest the South is at a similar disadvantage. In 1937 the per capita income in the South from dividends and interest was only $17.55 as compared with $68.97 for the rest of the country.

Since the South's people live so close to the poverty line, its many local political subdivisions have had great difficulty in providing the schools and other public services necessary in any civilized community. In 1935 the assessed value of taxable property in the South averaged only $463 per person, while in the nine Northeastern States it amounted to $1,370. In other words, the Northeastern States had three times as much property per person to support their schools and other institutions.

Consequently, the South is not able to bring its schools and many other public services up to national standards, even though it tax the available wealth as heavily as any other section. In 1936 the State and local governments of the South collected only $28.88 per person while the

States and local governments of the Nation as a whole collected $51.54 per person.

Although the South has 28 percent of the country's population, its Federal income-tax collections in 1934 were less than 12 percent of the national total. These collections averaged only $1.28 per capita throughout the South, ranging from 24 cents in Mississippi to $3.53 in Florida.

So much of the profit from southern industries goes to outside financiers, in the form of dividends and interest, that State income taxes would produce a meager yield in comparison with similar levies elsewhere. State taxation does not reach dividends which flow to corporation stockholders and management in other States; and, as a result, these people do not pay their share of the cost of southern schools and other institutions.

Under these circumstances the South has piled its tax burden on the backs of those least able to pay, in the form of sales taxes. (The poll tax keeps the poorer citizens from voting in eight southern States; thus they have no effective means of protesting against sales taxes.) In every southern State but one, 59 percent of the revenue is raised by sales taxes. In the northeast, on the other hand, not a single State gets more than 44 percent of its income from this source, and most of them get far less.

The efforts of southern communities to increase their revenues and to spread the tax burden more fairly have been impeded by the vigorous opposition of interests outside the region which control much of the South's wealth. Moreover, tax revision efforts have been hampered in some sections by the fear that their industries would move to neighboring communities which would tax them more lightly—or even grant them tax exemption for long periods.

The hope that industries would bring with them better living conditions and consequent higher tax revenues often has been defeated by the competitive tactics of the communities themselves. Many southern towns have found that industries which are not willing to pay their fair share of the cost of public services likewise are not willing to pay fair wages, and so add little to the community's wealth.

REPORT TO THE PRESIDENT
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SECTION 6

EDUCATION

Great numbers of Americans are continually moving from one region to another. This makes poor schooling in any region a matter of national concern. Illiteracy, poor training, lack of education, go along with those migrating people who have not had schools. The fact that the South is the source of a considerable part of the rest of the Nation's population makes the South's difficulties in providing school facilities a national problem.

In the United States as a whole it is more possible than ever before to supply training for children and young people. The child population has only doubled since 1880, while the adult population has increased more than threefold. Too, the productive capacity per worker today is far in excess of what it was 50 years ago. In the South, however, owing to the higher birth rate and to the migration of adult workers, the proportion of productive workers to school children is much lower than elsewhere in the country. A study of this condition in 1930 showed that there were 10 adults to 6 children as compared to 10 adults for 4 children in the North and West.

In the rural regions of the South, particularly, there is a marked disparity between the number of children to be educated and the means for educating them. For example, in 1930 the rural inhabitants of the Southeast had to care for 4,250,000 children of school age of the country's total, although they received an income of only about 2 percent of the Nation's total. In the nonfarm population of the Northeast, on the other hand, there were 8,500,000 children in a group that received 42 percent of the total national income—21 times as much income available to educate only twice as many children.

This disparity in the educational load, which bears so heavily on the South, continues. In 1936 the rate of natural increase in the population was greatest in the southeastern and southwestern sections of the United States, precisely where the lack of educational opportunity is already most pronounced.

The southern regions are affected by population shifts more than other sections because the greatest proportion of movers originate there. In the 1920's the States south of the Potomac and Ohio Rivers and east of the Mississippi lost about 1,700,000 persons through migration, about half of whom were between 15 and 35 years of age. These persons moved at the beginning of their productive life to regions which got this manpower almost free of cost, whereas the South, which had borne the expense of their care and education up to the time when they could start producing, suffered an almost complete loss of its investment. The newcomers to the South did not, by any means, balance this loss. The cost of rearing and schooling the young people of the southern rural districts who moved to cities has been estimated to be approximately $250,000,000 annually.

The South must educate one-third of the Nation's children with one-sixth of the Nation's school revenues. According to the most conservative estimates, the per capita ability of the richest State in the country to support education is six times as great as that of the poorest State.

Although southern teachers compare favorably with teachers elsewhere, the average annual salary of teachers in Arkansas for 1933–34 was $465, compared to $2,361 for New York State for the same year, and in no one of the Southern States was the average salary of teachers equal to the average of the Nation. In few places in the Nation, on the other hand, is the number of pupils per teacher higher than as in the South. Overcrowding of schools, particularly in rural areas, has lowered the standards of education, and the short school terms of southern rural schools further reduce their effectiveness.

In the South only 16 percent of the children enrolled in school are in high school as compared with 24 percent in States outside the South.

Higher education in the South has lagged far behind the rest of the Nation. The total endowments of the colleges and universities of the South are less than the combined endowments of Yale and Harvard. As for medical schools, the South does not have the facilities to educate sufficient doctors for its own needs.

Since adequate schools and other means of public education are indispensable to the successful functioning of a democratic nation, the country as a whole is concerned with the South's difficulty in meeting its problem of education.

Illiteracy was higher in 1930 in the Southern States than in any other region, totaling 8.8 percent. The North Central States had a percentage of 1.9. New England and the Middle Atlantic States combined had a percentage of 3.5. In the South the percentages ranged from 2.8 in Oklahoma to 14.9 in South Carolina. Every State in the South except Oklahoma had a percentage higher than 6.5 percent.

But the poor educational status of the South is not a result of lack of effort to support schools. The South collects in total taxes about half as much per person as the Nation as a whole. All Southern States fall below the national average in tax resources per child, although they devote a larger share of their tax income to schools. For the Southern States to spend the national average per pupil would require an additional quarter of a billion dollars of revenue.

Between 1933 and 1935 more than $21,000,000 of Federal funds were necessary to keep rural schools open, and more than 80 percent of this amount was needed in the South, where local and State governments were unable to carry the burden.

In 1936 the Southern States spent an average of $25.11 per child in schools, or about half the average for the country as a whole, or a quarter of what was spent per child in New York State. In 1935–36 the average school child enrolled in Mississippi had $27.47 spent on his education. At the same time the average school child enrolled in New York State had $141.43 spent on his education, or more than five times as much as was spent on a child in Mississippi. There were actually 1,500 school centers in Mississippi without school buildings, requiring children to attend school in lodge halls, abandoned tenant houses, country churches, and, in some instances, even in cotton pens.

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SECTION 7
HEALTH

For years evidence has been piling up that food, clothing, and housing influence not only the sickness rate and death rate but even the height and weight of school children. In the South, where family incomes are exceptionally low, the sickness and death rates are unusually high. Wage differentials become in fact differentials in health and life; poor health, in turn, affects wages.

The low-income belt of the South is a belt of sickness, misery, and unnecessary death. Its large proportion of low-income citizens are more subject to disease than the people of any similar area. The climate cannot be blamed—the South is as healthful as any section for those who have the necessary care, diet, and freedom from occupational disease.

Several years ago the United States Public Health Service conducted syphilis-control demonstrations in selected rural areas in the South. These studies revealed a much higher ratio of syphilis among Negroes than among whites, but showed further that this higher ratio was not due to physical differences between the races. It was found to be due to the greater poverty and lower living conditions of the Negroes. Similar studies of such diseases have shown that individual health cannot be separated from the health of the community as a whole.

The presence of malaria, which infects annually more than 2,000,000 people, is estimated to have reduced the industrial output of the South one-third. One of the most striking examples of the effect of malaria on industry was revealed by the Public Health Service in studies among employees of a cotton mill in eastern North Carolina. Previous to the attempts to control malaria, the records of the mill one month showed 66 looms were idle as a result of ill-health. After completion of control work, no looms were idle for that reason. Before control work, 238,046 pounds of cloth were manufactured in one month. After completion of the work production rose to 316,804 pounds in one month—an increase of 33⅓ percent.

In reports obtained in 1935 from 9 lumber companies, owning 14 sawmill villages in 5 southern States, there was agreement that malaria was an important and increasing problem among the employees. During the year 7.6 percent of hospital admissions, 16.4 percent of physician calls, and 19.7 percent of dispensary drugs were for malaria. The average number of days off duty per case of malaria was 9, while days in the hospital for the same cause were 5. Ten railroads in the South listed malaria as an economic problem and a costly liability. Four utility companies had full-time mosquito-fighting crews at work during the year. The average case admitted to a company hospital lasted 3 days and the average number of days off duty because of malaria was 11. Each case of malaria was said to cost the companies $40.

If we attempt to place a monetary value on malaria by accepting the figure of $10,000 as the value of an average life and using the death rate of 3.943 for malaria reported by the census for 1936, the annual cost of deaths from this disease is $39,500,000. To this figure could be added the cost of illness, including days of work lost.

The health-protection facilities of the South are limited. For example, there are only one-third as many doctors per capita in South Carolina as there are in California. The South is deficient in hospitals and clinics, as well as in health workers. Many counties have no facilities at all.

The South has only begun to look into its pressing industrial hygiene problems, although it has 26 percent of the male mine workers in the United States and 14 percent of the male factory workers. These are the workers with which modern industrial health protection is most concerned.

The experience as to pneumonia and tuberculosis among employees of the Tennessee Coal, Iron & Railroad Co. and their dependents during the 11-year period from 1925 to 1935 gives an indication of health conditions among miners in the South. The situation generally is probably worse than shown by the figures for this company, whose workers have relatively better protection against disease. For this period the number under observation averaged slightly more than 77,000 persons. There were 3,780 cases of pneumonia, of which 739 terminated fatally. This resulted in an average frequency per 1,000 of approximately 4.9 pneumonia cases per year among surface workers, 4.7 among coal miners, and 10.6 among ore miners. The rate of 4.2 for dependents included also the pneumonia of childhood and infancy. A fatality rate of 30.7 deaths per 1,000 cases of pneumonia was found among surface workers, a rate of 26.8 among coal miners, and 24.8 among ore miners. Deaths from tuberculosis occurred at an annual rate of 1.467 per thousand workers among coal miners, 1.232 among ore miners, and 0.566 among surface workers.

Prior to 1936 only one State in the South gave consideration to industrial hygiene. Today, with the aid of Social Security funds, seven additional States have industrial-hygiene units, and approximately 7,000,000 of the 10,000,000 gainful workers are receiving some type of industrial-hygiene service. However, these industrial-hygiene units have started their programs only recently, and it will be some time before adequate health services will be available. The funds now being spent for this activity in the eight States which have industrial-hygiene services do not meet the problem of protecting and improving the health of these workers. Approximately $100,000 is now being budgeted for this work, although it is known that the economic loss due to industrial injuries and illnesses among these workers is hundreds of millions of dollars.

Reports of one of the largest life-insurance companies show that more people in the southern area than elsewhere die without medical aid. The same company reported in a recent year a rise of 7.3 percent in the death rate in the nine South Atlantic States, though in no other region had the death rate risen above 4.8 percent, and in some sections it had declined.

The scourge of pellagra, that affects the South almost exclusively, is a disease chiefly due to inadequate diet; it responds to rather simple preventive measures, including suitable nourishing food. Even in southern cities from 60 to 88 percent of the families of low incomes are spending for food less than enough to purchase an adequate diet.

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SECTION 8

HOUSING

The effects of bad housing can be measured directly in the general welfare. It lessens industrial efficiency, encourages inferior citizenship, lowers the standard of family life, and deprives people of reasonable comfort. There are also direct relationships between poor housing and poor health, and between poor housing and crime.

The type of slum most usual in southern towns consists of antiquated, poorly built rental quarters for working people. The rows of wooden houses without any modern improvements, without proper sanitary facilities, and often without running water, are usually in congested areas and in the least desirable locations. Often they are next to mills or mines where the tenants work, or on low swampy land subject to floods and no good for anything else. They are usually far removed from playgrounds and other recreation areas. The southern slum has often been built to be a slum. It is simply a convenient barracks for a supply of cheap labor.

Lack of running water and impure water supplies are common in southern slums. Bathtubs, sinks, and laundry tubs are among the bare necessities that are often lacking in slum dwellings. Sometimes city water is supplied through a yard hydrant shared by several families. Surface wells are often contaminated on the farms and in the villages and small towns. Contaminated milk and contaminated water, frequently found, cause typhoid fever, which is becoming a widespread rural disease in the South.

Lack of sanitary flush toilets and sewer systems for waste disposal is characteristic not only of the great majority of farm and rural homes, but of a large proportion of homes in small towns and a substantial number in the cities. Twenty-six percent of southern city or town households are without indoor flush toilets as contrasted with 13.1 percent for the city and town households of the country as a whole. In extensive rural districts there are not only no indoor flush toilets, but no outdoor privies even of the most primitive sort. Nearly a fifth of all southern farm homes have no toilets at all. It is in these regions that hookworm infection and consequent anemia have flourished as a result of soil pollution.

There is also extensive overcrowding in the southern town areas. In one-eighth of the dwellings there are more than one and one-half persons per room. In the United States as a whole only one-fourteenth of town houses are so crowded. In 19 southern cities recently studied over 40 percent of all dwellings rent for less than $15 a month or are valued at less than $1,500, as opposed to 24.6 percent for the 64 cities studied in the country as a whole. Only three of the southern cities had a smaller percentage of dilapidated houses than the national average. Five of the 8 cities with over a quarter of their houses in bad condition were in the South; 1 of these had 4 out of 10 of its houses either in need of repairs or unfit for habitation.

A study of blighted areas in New Orleans showed that their tuberculosis death rate was twice as high as the city's average, that their number of criminal arrests was 40 percent higher than the average, and that syphilis and cancer rates were high.

Houses in the rural South are the oldest, have the lowest value, and have the greatest need of repairs of any farm houses in the United States.

That there are 2½ million below-standard houses would be a conservative estimate. Of 3 million farm houses in 14 southern States, including West Virginia, surveyed in 1930 only 5.7 percent had water piped to the house and 3.4 percent had water piped to the bathroom. More than half the farmhouses are unpainted. More than a third of southern farmhouses do not have screens to keep out mosquitoes and flies.

If we consider below-standard all nonfarm dwellings in the 14 States renting for less than $10 a month, and all occupant-owned nonfarm dwellings valued at less than $1,500, we find 1½ million below-standard houses. Recent studies by local housing authorities in many of the southern cities indicate that these assumptions are correct. In addition, many houses now renting between $10 and $15 are definitely below standard. The average farmhouse in the South is worth about $650. The average farm renter's house is worth about $350, according to the Federal census of 1930.

Southern cities have one important advantage over northern cities in their approach to the housing problem. As a rule, they are not hampered by the excessive land valuations that have developed in the North with the rapid growth and centralization of industry. Although the 1930 census shows that the rate of movement to cities and towns is greater in the South than in the North, the effect of this is not yet reflected in town and city land values and is not likely to be while wages remain low. It is, however, reflected in poorer living conditions, overcrowding, and greater danger of the spread of certain diseases.

By the most conservative estimates, 4,000,000 southern families should be rehoused. This is one-half of all families in the South.

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LABOR

The rapidly growing population of the South is faced with the problem of finding work that will provide a decent living. Neither on the farm nor in the factory is there the certainty of a continuing livelihood, and thousands of southerners shift each year from farm to mill or mine and back again to farm.

The insecurity of work in southern agriculture, its changes in method, and its changes in location, make the labor problem of the South not simply an industrial labor problem. Neither the farm population nor the industrial workers can be treated separately, because both groups, as a whole, receive too little income to enable their members to accumulate the property that tends to keep people stable. Industrial labor in the South is to a great extent unskilled and, therefore, subject to the competition of recurring migrations from the farm—people who have lost in the gamble of one-crop share farming. On the other hand, the industrial workers, with low wages and long hours, are constantly tempted to return to the farm for another try.

As industries requiring a large proportion of skilled workers have been slow in developing, the unskilled industrial labor in the South is particularly hampered by the competition of unskilled workers from the farms who accept low wages in preference to destitution at home. Much of the South's increase in industrial activity has been brought about by the removal of cotton goods manufacturing plants to the Southeast from higher wage areas in New England. This backbone of southern industry ranks nationally as one of the low-wage manufacturing industries. In the South it pays even lower wages than elsewhere. According to 1937 figures, the pay for the most skilled work in this industry is about 12 cents an hour less in the South than the pay for the same work elsewhere. The figures for the cotton goods industry also show the large number of low-wage workers and the small number receiving high wages in the South. More than half of the workers in southern mills earn under 37.5 cents an hour, although in the rest of the country the industry employs less than 10 percent at such low rates. In the South less than one-tenth of the workers are paid more than 52.5 cents an hour, although one-fourth of the workers in the rest of the Nation's cotton goods industry are paid above this rate.

Similar differentials between the South and other regions are found in lumber, furniture, iron and steel, coal mining, and other industries generally. The influence of the farm population's competition is shown in the unskilled occupations where these wage differentials are widest. The average differential in rates for new labor between the South and the rest of the country in 20 of the country's important industries in 1937 amounted to 16 cents an hour.

In spite of longer working hours, the total annual wages show the same discrepancy. The average yearly pay per person in industry and business in the South in 1935 was $865.41 as compared with $1,219.31 for the rest of the country.

Wage differentials are reflected in lower living standards. Differences in costs of living between the southern cities and cities in the Nation as a whole are not great enough to justify the differentials in wages that exist. In 1935 a study of costs of living showed that a minimum emergency standard required a family income of $75.27 a month as an average for all the cities surveyed. The average of costs in southern cities showed that $71.94 a month would furnish the minimum emergency standard. This would indicate a difference of less than 5 percent in living costs. Industrial earnings for workers are often 30 to 50 percent below national averages.

Low wages and poverty are in great measure self-perpetuating. Labor organization has made slow and difficult progress among the low-paid workers, and they have had little collective bargaining power or organized influence on social legislation. Tax resources have been low because of low incomes in the communities, and they have been inadequate to provide for the type of education modern industry requires. Malnutrition has had its influence on the efficiency of workers. Low living standards have forced other members of workers' families to seek employment to make ends meet. These additions to the labor market tend further to depress wages.

Low wages have helped industry little in the South. Not only have they curtailed the purchasing power on which local industry is dependent, but they have made possible the occasional survival of inefficient concerns. The standard of wages fixed by such plants and by agriculture has lowered the levels of unskilled and semiskilled workers, even in modern and well-managed establishments. While southern workers, when well trained and working under modern conditions, are thoroughly efficient producers, there is not enough such employment to bring the wage levels into line with the skill of the workers.

Unemployment in the South has not resulted simply from the depression. Both in agriculture and industry, large numbers have for years been living only half-employed or a quarter employed or scarcely employed at all. In the problem of unemployment in the South, the relation between agriculture and industry becomes notably clear. Over 30 percent of the persons employed on emergency works programs are farmers and farm laborers, as compared to 15.3 percent for the country as a whole. The insecurity of southern farmers is reflected in these figures. Seasonal wages in agriculture do not provide incomes sufficient to tide workers over the slack seasons. Part-time industrial work does not provide security the year round. As long as the agricultural worker cannot gain assurance of a continuing existence on the farm, he remains a threat to the job, the wages, and the working conditions of the industrial worker.

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SECTION 10

WOMEN AND CHILDREN

Child labor is more common in the South than in any other section of the Nation, and several Southern States are among those which have the largest proportion of their women in gainful work. Moreover, women and children work under fewer legal safeguards than women and children elsewhere in the Nation.

Low industrial wages for men in the South frequently force upon their children as well as their wives a large part of the burden of family support. In agriculture, because of poor land and equipment, entire families must work in order to make their living.

The 1930 census, latest source of comprehensive information on child labor, showed that about three-fourths of all gainfully employed children from 10 to 15 years old worked in the Southern States, although these States contained less than one-third of the country's children between those ages.

Child labor, itself due to low wages for adult workers, is also a source of cheap competing labor, and thus it tends to make wages even lower, hours even longer, and generally to break down labor standards. Child labor, therefore, affects not only the child itself, but it undermines security of adult workers, and thus reacts seriously on the whole community and, indeed, the whole Nation.

The South leads the Nation in the employment of children in both farm and industrial work. One hundred eight out of every 1,000 children between 10 and 15 years old were employed in the South, compared to 47 out of every 1,000 children of these ages in the country as a whole. Only Oklahoma and Virginia, of all the Southern States, employ fewer child workers than the average for the country. Child labor legislation in these 13 States, as in the United States in general, does not apply to agricultural work, but is directed primarily to industrial and commercial employment. In some instances the coverage of the law is restricted to a few types of industrial establishments, and in other instances the laws themselves contain exemptions which greatly weaken their effectiveness. Only North and South Carolina have established a basic minimum age of 16 years for employment. Texas has a 15-year minimum age standard, but it applies only to factory and related employment. The remaining 10 States have a minimum age of 14, but in 8 of the 10 States the laws contain exemptions permitting employment below this age.

The effectiveness of child labor legislation depends upon the provisions for its enforcement. Employment certification and proper inspection are necessary to make such legislation effective. Three of the five States in the country which have not made legal provision for employment certificates are Southern States.

Employment of children affects school attendance. The proportion of children 10 to 15 years of age in the Southern States attending school in 1930 was 90 percent, as compared with 94 percent for the United States as a whole. If consideration were given to the number of days of school attendance, the disparity would appear much greater; the school term generally is shorter in the South than in other sections.

The upper age for compulsory school attendance throughout the rest of the country is generally 16 to 18. However, two Southern States require attendance only to 14, one to 15, and only in two States does the upper age extend above 16 years. All permit exemptions which materially lessen their effectiveness.

In many parts of the South legislation to protect women workers and to establish proper working standards for them has not been well developed. This has had far-reaching effects on the health, the living conditions, and the general well-being of women and their families.

In a region where workers generally are exploited, women are subjected to an even more intense form of exploitation. Many women work more than 50 hours a week in cotton and other textile mills, and in the shoe, bag, paper box, drug, and similar factories in certain Southern States.

The South has two of the four states in the entire Nation that have enacted no laws whatever to fix maximum hours for women workers. Only one of the Southern States has established an 8-hour day for women in any industry. Only four of the Southern States have applied a week as short as 48 hours for women in any industry.

Reports for a number of industries, including cotton manufacturing, have shown wage earners receiving wages well below those estimated by the Works Progress Administration as the lowest which would maintain a worker's family.

Women's wages ordinarily amount to less than men's. However, only two of the Southern States have enacted a law providing a minimum wage for women, though several others are attempting to pass such legislation. Recent pay-roll figures show women textile workers in an important southern textile State receiving average wages 10 percent below the average outside the South. Other figures show that a week's wage of less than $10 was received by more than half the women in one State's cotton mills, and by a large part of the women in the seamless hosiery plants of three States and in the men's work-clothes factories of two States.

Many women, even though employed full time, must receive public aid because their wages are insufficient to care for themselves and their children. The community thus carries part of the burden of these low wages and, in effect, subsidizes the employer.

One condition tending to lower women's wages is the system by which factories "farm out" work to be done in homes. Women have been found at extremely low pay doing such work as making artificial flowers, sewing buttons on cards, clocking hosiery, embroidering children's clothing, stuffing and stitching baseballs. Although this is a relatively recent tendency in the South, there are indications that such work is increasing. Usually the pay is far below that paid in the factory. A study of industrial home work on infants' wear disclosed that the women worked much longer hours than in the factory, though half of them received less than $2.73 for their week's work.

A low wage scale means low living standards, insufficient food for many, a great amount of illness, and, in general, unhealthful and undesirable conditions of life.

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SECTION 11

OWNERSHIP AND USE OF LAND

The farming South depends on cotton and tobacco for two-thirds of its cash income. More than half of its farmers depend on cotton alone. They are one-crop farmers, subjected year after year to risks which would appall the average businessman. All their eggs are in one basket—a basket which can be upset, and often is, by the weather, the boll weevil, or the cotton market.

The boll weevil can be conquered, and weather hazards tend to cancel themselves out as good seasons follow bad; but the cotton market is a sheer gamble. On this gamble nearly 2,000,000 southern families stake their year's work and everything they own. Their only chance of making a living is tied up with the fluctuations of the world price of cotton.

No other similar area in the world gambles its welfare and the destinies of so many people on a single crop market year after year.

The gamble is not a good one. Few other crops are subject to such violent and unpredictable price variations as cotton. In 1927 cotton farmers got 20 cents a pound for their crop; in 1929 they got 16 cents; in 1931 they got 6 cents; in 1933 they got 10 cents. Only once during the last decade did the price of cotton change less than 10 percent between pickings. Three times in 5 years it jumped more than 40 percent—once up and twice down.

Because cotton is the cornerstone of the economy of many parts of the South, the merchants, manufacturers, businessmen, and bankers share the hazards of the farmer. The men who finance cotton farming charge high interest rates because their money is subject to far more than the normal commercial risk. As a result, the mortgage debt of southern farm owners has been growing steadily for the last 20 years. A check-up on 46 scattered counties in the South in 1934 showed that one-tenth of the farm land was in the hands of corporations, mostly banks and insurance companies, which had been forced to foreclose their mortgages.

This process has forced more than half of the South's farmers into the status of tenants, tilling land they do not own. Whites and Negroes have suffered alike. Of the 1,831,000 tenant families in the region, about 66 percent are white. Approximately half of the sharecroppers are white, living under economic conditions almost identical with those of Negro sharecroppers.

The pattern of southern tenancy was set at the end of the War between the States, which left thousands of former slave owners with plenty of land but no capital or labor to work it. Hundreds of thousands of former slaves and impoverished whites were willing to work but had no land. The result was the crop-sharing system, under which the land was worked by men who paid for the privilege with a share of their harvest. It was natural under this system that landowners should prefer to have virtually all the land put in cotton or other cash crops from which they could easily get their money. Consequently, over wide areas of the South cash-cropping, one-crop farming, and tenant farming have come to mean practically the same thing. Diversification has been difficult, because the landlord and tenant usually have not been able to find a workable method of financing, producing, and sharing the return from such crops as garden truck, pigs, and dairy products.

Tenant families form the most unstable part of our population. More than a third of them move every year, and only a small percentage stay on the same place long enough to carry out a 5-year crop rotation. Such frequent moves are primarily the result of the traditional tenure system, under which most renters hold the land by a mere spoken agreement, with no assurance that they will be on the same place next season. Less than 2 percent have written leases which give them security of tenure for more than one year.

Under these circumstances the tenant has no incentive to protect the soil, plant cover crops, or keep buildings in repair. On the contrary, he has every reason to mine the soil for every possible penny of immediate cash return.

The moving habit, moreover, is costly. Most renters merely swap farms every few years without gain to themselves or anybody else. The bare cost of moving has been estimated at about $57 per family, or more than $25,000,000 annually for the tenants of the South. Children are taken out of school in midyear, and usually fall behind with their studies. It is almost impossible for a family constantly on the move to take an active part in community affairs; and, as a consequence, churches and other institutions suffer. For example, in one area of North Carolina where the percentage of tenancy is low, there were 257 churches, with 21,000 members. In a nearby area of high tenancy—with three and one-half times as many people—there were only 218 churches, with 17,000 members.

While it is growing more cotton and tobacco than it can use or sell profitably, the South is failing to raise the things it needs. Southern farmers grow at home less than one-fifth of the things they use; four-fifths of all they eat and wear is purchased.

For example, the region has more than half of the Nation's farm people, yet it raises less than one-third of the Nation's pigs and cattle. Although it has more than a fourth of America's total population, it produces only one-fifth of the country's eggs, milk, and butter, one-seventh of the hay, one-eighth of the potatoes, and one-twelfth of the oats. Consequently the South must either obtain these things from other regions and pay handling and freight charges or do without.

Too many southern families have simply done without, and as a result they have suffered severely from malnutrition and dietary diseases. Many common vegetables are rarities in many southern farming communities, although both soil and climate are extremely favorable to their growth. Production of foodstuffs could be increased manyfold in the South without infringing on the markets of any other region; most of the increased output could, and should, be absorbed by the very farm families producing it.

Because they have concentrated on cash crops, southern farmers have planted relatively little of their land in alfalfa, clover, field peas, and soybeans. These and similar legumes add fertility to the soil and at the same time protect fields against washing and gullying. If widely used, they would help the farmer to protect his investment in his land and take a little of the gamble out of his business.

On the other hand, cotton, tobacco, and corn use up the natural richness of the land with great speed. Fields planted to them year after year wear out and wash away much more quickly than fields on which legumes are planted in rotation with cash crops. Yet 6 acres of southern crop land out of every 10 are planted one season after another in cotton, tobacco, and corn.

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SECTION 12

CREDIT

There has never been enough capital and credit in the South to meet the needs of its farmers and its industry. Its people have been living so close to poverty that the South has found it almost impossible to scrape together enough capital to develop its natural resources for the benefit of its own citizens.

Lacking capital of its own the South has been forced to borrow from outside financiers, who have reaped a rich harvest in the form of interest and dividends. At the same time it has had to hand over the control of much of its business and industry to investors from wealthier sections.

A glance at the bank reports shows how difficult it has been for the southern people, whose average income is the lowest in the Nation, to build up savings of their own. Although the region contains 28 percent of the country's population, in July 1937, its banks held less than 11 percent of the Nation's bank deposits, or only $150 per capita, as compared with $471 per capita for the rest of the United States. Savings deposits were less than 6 percent of the national total. Of the 66 banks having deposits of $100,000,000 or more only two are in the South, and they barely qualify.

Even these figures do not fully disclose how small a share the South plays in the country's financial life.

Southern investment banking firms managed only 0.07 percent of the security issues larger than $1,000,000 which were offered for sale between July 1, 1936, and June 1, 1938—and it is the investment bankers who find the money for virtually all important industries.

Insurance company funds reflect the same story. Southern companies hold only $756,000,000, or about 2.6 percent, of the $28,418,000,000 of assets held by the Nation's life-insurance companies.

The scarcity of local credit sources results in high interest rates and lays a heavy burden both on individuals and local governments. The average interest paid on southern State, county, and municipal bonds is 4.4 percent, while the rest of the country pays only 3.98. The weighted average interest rates charged by banks in 27 large southern and western cities in June 1938 was 4.14 percent, while for New York City it was only 2.36 percent, and for 8 other northern and eastern cities only 3.38 percent.

State banks outside the Federal Reserve System, but insured by the Federal Deposit Insurance Corporation, charge average interest rates in the South ranging from 6.5 percent in Virginia to 10.43 percent in Texas and 11.5 percent in Oklahoma. In the New England and the Middle Atlantic States, on the other hand, it is 5.75 percent. In the Mountain States the highest average is 8.5 percent, which is lower than in 5 of the Southern States.

Banking laws and regulations have contributed still further to the scarcity of southern credit. Ordinarily, banks can make credit available for capital purposes only by the purchase of readily marketable securities. This makes it almost necessary for a security to be listed on an exchange or to have an active over-the-counter market. Locally owned southern industries are usually too small to meet these requirements. Recently these requirements have been liberalized, but it is too early to tell whether the change will be helpful.

Faced with these handicaps, the South has had to look beyond its boundaries for the financing of virtually all of its large industries and many of its small ones. This has turned policy-making powers over to outside managements whose other interests often lead them to exercise their authority against the South's best advantage. For example, many such companies buy most of their goods outside of the South, and often their sales policies are dictated in the interest of allied corporations in other sections of the country.

If the high cost of credit has hampered southern industry, its effect on farming might be illustrated by the remark of Louis XIV: "Credit supports agriculture, as the rope supports the hanged." Almost the only sources of credit for small farmers—aside from Federal agencies—are (1) local banks, (2) landlords, and (3) merchants and dealers.

The banks cannot meet all credit demands, because whatever scant deposits they may have are largest in the fall and winter, after harvest, and smallest in the spring and summer, when the need for farm financing is greatest.

As a result, the majority of southern tenant farmers must depend for credit on their landlords or the "furnish merchant" who supplies seed, food, and fertilizer. Their advances, in fact, have largely replaced currency for a considerable part of the rural population. For security the landlord or merchant takes a lien on the entire crop, which is to be turned over to him immediately after harvest in settlement of the debt. Usually he keeps the books and fixes the interest rate. Even if he is fair and does not charge excessive interest, the tenants often find themselves in debt at the end of the year. This is not necessarily a reflection on the planter-merchant; very often he would like to improve the lot of his tenants but must exploit them in order that he himself may survive.

The credit difficulties of the landlord are only a little less oppressive than those of his tenants. Because he ordinarily stakes everything on a single cash crop—cotton or tobacco—which is subject to wildly fluctuating markets, the landowner is a poor credit risk. Consequently he often must pay interest rates as high as 20 percent, making the rates for tenants range considerably higher.

Attempts to find a remedy through credit unions have met with slight success, although such organizations are spreading. On January 1, 1938, there were 564 Federal credit unions in the South, with 80,530 members and assets totaling $2,851,500. The unions are not evenly distributed throughout the region, however, since Texas alone had 167 while Kentucky had only 4.

Some of the South's credit difficulties have been slightly relieved in recent years by the extension of credit from Federal agencies—to the business man by the Reconstruction Finance Corporation, to the farmer by the Farm Security and Farm Credit Administrations, to municipalities by the Public Works Administration. Many other agencies, ranging from the Works Progress Administration to the Soil Conservation Service, have brought desperately needed funds into the South

The fact remains, however, that the South has not yet been able to build up an adequate supply of credit—the basis of the present-day economic system.

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SECTION 13

USE OF NATURAL RESOURCES

The great natural resources of the South have been exploited with the traditional American regard for cream and disregard for skimmed milk. Perhaps no worse than in the rest of the country, but with serious effect on the South, forests have been girdled, chopped, and burned without regard for their permanent value as timber or as conservers of the soil and rainfall.

Ruthless measures have been used to obtain the best ore, oil, or gas with the least effort. Careless room-and-pillar mining has resulted in the abandonment of untold tons of southern coal in deserted mines. In 1935 the Nation lost through wastage 479,826,000,000 cubic feet of natural gas, not including wastage at the wellheads. The Panhandle section of Texas alone accounted for 67 percent of this extravagant loss. Other sections of the South, similarly guilty, failed to take advantage of inventions which would have saved and used much of their gas.

Because of the poverty in which the South was left after the War between the States, and because of the high cost of credit since that time, a very large share of the natural resources of the South is owned in other regions. To the extent that this is true, the South is exposed to a double danger. On the one hand, it is possible for a monopolistic corporation in another region of the country to purchase and leave unused resources in the South which otherwise might be developed in competition with the monopoly. On the other hand, the large absentee ownership of the South's natural resources and the South's industry makes it possible for residents elsewhere to influence greatly the manner in which the South is developed and to subordinate that development to other interests outside the South.

The public utilities in the South are almost completely controlled by outside interests. All the major railroad systems are owned and controlled elsewhere. Most of the great electric holding company systems, whose operating companies furnish the light, heat, and power for southern homes and industries, are directed, managed, and owned by outside interests. Likewise, the transmission and distribution of natural gas, one of the South's great assets, is almost completely in the hands of remote financial institutions. The richest deposits of the iron ore, coal, and limestone that form the basis for the steel industry in Birmingham are owned or controlled outside of the region. Until recently, too, the Birmingham area was subordinated to the Pittsburgh area as a result of a system of pricing steel which placed it at a tremendous disadvantage. As a result of this disadvantage—that is, because it was more economical for them to be in the areas formerly favored by the artificial price system—the fabrication plants which use most of the steel were not constructed in the Birmingham area. The fact that these fabrication plants are outside of the South will make it hard for the South now to find a ready market for its steel, even though the pricing system has been changed.

Most of the rich deposits of bauxite, from which aluminum is made, are owned or controlled outside the region. Practically all important deposits of zinc ore in the South are owned elsewhere, and the principal zinc-mining company in the Southwest is a subsidiary of a company completely owned and controlled outside of the area of its operation. The South's resources of zinc ore and the South's consumption of zinc paints and metalware are separated by a long northern detour, because absentee ownership and discriminatory freight rates make it cheaper to ship raw materials north for processing than to manufacture them at home.

Over 99 percent of the sulphur produced in the United States comes from Texas and Louisiana. Two extraction companies control practically the entire output. Both are owned and controlled outside the South. One has 15 directors and the other 9, but only 1 member of each board resides in the South.

For mining its mineral wealth and shipping it away in a raw or semifinished form the South frequently receives nothing but the low wages of unskilled and semiskilled labor. The wages for manufacturing this natural wealth into finished products often do not go to southerners, but to workers in other areas; and the profits likewise usually go to financial institutions in other regions. When a southerner buys the finished product, on the other hand, the price he pays includes all the wasteful cross-hauling involved in the present system.

In North Carolina and Tennessee is produced 36 percent of the total ground feldspar of the Nation; but one can look in vain in the South for any important tile, glass, enamel, insulator, or scouring soap industries using this product. Georgia produces 66 percent of the kaolin output of the country and South Carolina 20 percent; but their industries use little of this clay. Kentucky is a ranking fluorspar producer, but practically its entire production is shipped out of the South. The processing of cotton into textiles is the major southern industry; but many of the largest mills are owned outside of the region. Other mills are only recent emigrants from northern locations to the South.

The manufacture of cellulose into artificial silk, or rayon, presents a striking example of absentee ownership. The American Bemberg Corporation, with large mills in Tennessee, uses patents and processes exclusively owned in Germany. Of the company's 14 directors, 5 are German, 3 are Dutch, and 4 are American residents in New York.

REPORT TO THE PRESIDENT
ON
THE ECONOMIC CONDITIONS OF THE SOUTH

SECTION 14

INDUSTRY

Since the War between the States industry has become in the minds of most Americans a symbol of profit and wealth. Certainly the wealthiest parts of our country are the most industrialized. There has long been a strong "New South" movement striving to achieve for the South the wealth that is supposed to come from industry.

With respect to the manufacture of cotton textiles, the South has come from a subordinate position in 1860 to a dominating position today. It is natural that the South's most outstanding accomplishment in industry should be the processing of its greatest agricultural crop. The cotton manufacturing industry started in the latter part of the nineteenth century with small subscriptions of stock provided, for the most part, by southerners; but when these mills began to compete successfully with the New England mills northern capital was introduced, and later a great many northern mills were shifted to the South.

Earnings on the investment in the southern mills, as indicated by figures for 1933–34, are considerably higher than those in the North, but the wages paid as reported from 1919 to 1933 are considerably less.

During the year 1933 the percentage of the wages to the value added by manufacture was 60.8 percent in five States in New England, as against 55.5 percent in five Southern States.

The development in recent years of the manufacture of cottonseed products has proved valuable to the South. In 1929 the value of these products reached $265,247,000, about half of which was for cottonseed oil. The further development of cottonseed oil for oleomargarine and kindred products has been hampered by taxes, licenses, and other restrictive legislation not only by States outside the region but also by the Federal Government.

The manufacture of cigarettes has become important in North Carolina and Virginia. The iron and coal industries are important in Alabama. The use of the southern forests for many purposes has constantly grown. In January 1938 the South had 38 pulp mills built or being built, with a total investment estimated at some $200,000,000. Many new uses have been found for this pulp, such as the manufacture of building boards, rayon staple fiber, wrapping paper, and quite recently newsprint paper. As the United States is the largest consumer of wood pulp in the world, the development of this industry in the South is significant.

Meager facilities exist in the South for research that might lead to the development of new industries especially adapted to the South's resources. Some new industries have been developing in the South, but others have disappeared.

In addition to absentee ownership and the high cost of credit, the major problem which faces almost all industry in the South is that of freight rate differentials. The present interterritorial freight rates which apply on movements into other areas of many southern manufactured and semifinished goods, and some agricultural products and raw materials, handicap the development of industry in the South. This disadvantage works a hardship particularly with regard to shipments into the important northeastern territory. This region, containing 51 percent of the Nation's population, is the greatest consuming area. The southeastern manufacturer sending goods across the boundary into this region is at a relative disadvantage of approximately 39 percent in the charges which he has to pay as compared with the rates for similar shipments entirely within the eastern rate territory. The southwestern manufacturer, with a 75 percent relative disadvantage, is even worse off. Such a disadvantage applies to the southern shipper even when, distance considered, he is entirely justified on economic grounds in competing with producers within the eastern territory.

In effect, this difference in freight rates creates a man-made wall to replace the natural barrier long since overcome by modern railroad engineering. Both actual and potential southern manufacturers are hampered because attractive markets are restricted by the existence of a barrier that is now completely artificial. The southern producer, attempting to build up a large-scale production on the decreasing cost principle, finds his goods barred from the wider markets in the Nation's most populous area. In marketing his products over the wall he is forced to absorb the differences in freight charges.

Two chief reasons for higher freight rates have disappeared. One was the greater expense of railroading in the South, due to physical difficulties. This has been minimized by modern engineering. Another was the comparative lack of traffic that prevented the spreading of the cost. This no longer is the case, since many important southern roads have as great a traffic density as those above the Ohio River. The operating costs of southern lines today are lower than those in the eastern territory.

The artificial rate structure handicaps the South in its efforts to expand and diversify its industry. For example, under present conditions it is cheaper to concentrate and ship the South's zinc ore to the North, where it is made into metallic zinc, used to coat northern steel, and shipped back to the South for its "tin" roofs and other galvanized ironware, than it is to convert this zinc ore in the South without the economic loss of cross hauling.

An equally serious deterrent to the South's economic development has been the Nation's traditional high tariff policy. The South has been forced for generations to sell its agricultural products in an unprotected world market, and to buy its manufactured goods at prices supported by high tariffs. The South, in fact, has been caught in a vise that has kept it from moving along with the main stream of American economic life. On the one hand, the freight rates have hampered its industry; on the other hand, our high tariff has subsidized industry in other sections of the country at the expense of the South. Penalized for being rural, and handicapped in its efforts to industrialize, the economic life of the South has been squeezed to a point where the purchasing power of the southern people does not provide an adequate market for its own industries nor an attractive market for those of the rest of the country.

Moreover, by curtailing imports, the tariff has reduced the ability of foreign countries to buy American cotton and other agricultural exports. America's trade restrictions, without sufficient expansion of our domestic markets for southern products, have hurt the South more than any other region.

REPORT TO THE PRESIDENT
ON
THE ECONOMIC CONDITIONS OF THE SOUTH

SECTION 15

PURCHASING POWER

The South is the Nation's greatest untapped market and the market in which American business can expand most easily. The cost of "selling" the South modern conveniences is already being borne, to large extent, since the methods that now sell the rest of the Nation reach the South with little or no extra cost. Radio, movies, periodicals, and other instruments of national scope for acquainting the public with new things have "sold" southerners as they have sold other Americans. There are no language barriers, no geographical obstacles, no tariff walls, no psychological difficulties to be overcome. The people of the South need to buy, they want to buy, and they would buy—if they had the money.

The South has an abundance of the things the Nation needs. Its vast stores of raw materials—forest, mineral, and agricultural; its extensive power resources—water coal, oil, and natural gas; its ample transportation facilities—rail, water, and air—and its varied climate, could make the South a tremendous trader with the rest of the Nation. Its growing population, with vast needs and desires, now largely unfilled, could keep a large part of the rest of the country busy supplying them. Such a relationship would help the South and the rest of the Nation. Both have lost because this relationship does not exist.

The South's people want and need houses, radios, butter, beef, vegetables, milk, eggs, dresses, shirts, shoes. They want and could use the many thousands of things, little and big, that men and machines make to bring health and good living to people. The average southerner with a total income of $315 could spend, without help, twice that amount for the things he needs and needs badly.

A study of southern farm-operating white families not receiving relief or other assistance showed that those whose income averaged $390 spent annually only $49 on the food they bought, $31 on clothing, $12 on medical care, $1 on recreation, $1 on reading, $2 on education. A similar study of southern white village residents showed that those whose incomes were under $750 a year spent 75 cents or more out of every dollar for food, clothing, housing, heating, lighting, and running the house. Only one in four of these families owned an automobile of any description.

Southern people need food. The all too common diet in the rural South of fatback, corn bread, and molasses, with its resulting pellagra and other dietary diseases, is not dictated by taste alone. There is a deficiency in the consumption of necessary foods even among employed, wage-earning families in the cities of the South. The average per capita butter consumption in cities in this region was found to be about half of that in eastern cities and a quarter of that in cities on the Pacific coast. Studies of gainfully employed nonrelief white workers in ten of the largest cities of the South showed that less than two-thirds spent enough money to buy an "adequate diet at minimum cost," as calculated by the Bureau of Home Economics. This same study gives further evidence of underconsumption by wage earners and lower salaried clerical workers. No relief families were studied.

The fact that the families who could spend annually $500 or over per person consumed well over half again as much meat, poultry, fish, and eggs, about four times as much cheese, twice as many tomatoes, 30 percent more bread, and well over twice as much fruit of all kinds as the families who could spend $300 annually per person reveals the possibility of a vastly increased market for foodstuffs of all kinds. The extent of the South's underconsumption of these basic foodstuffs can be estimated from the fact that half of the people of the South have an income of less than $300 a year.

Southern people need clothes. Farm families in Mississippi and Georgia with annual incomes below $250 spent between $19 and $41 for clothing per year. In villages husband-and-wife families not on relief, with incomes of less than $500 a year, spent $14 for the husband's and $15 for the wife's clothing; of these amounts, they spent $3 for shoes and shoe repairs, $1 for coats and other wraps, $1 for hats and caps. Farm families having similar incomes spent $15 for the husband's wardrobe, $12 for the wife's.

One-half of the southern people, and an even larger percent of rural southerners, need new houses. More than 90 percent of the rural families need water piped into their houses; even more need water in their bathrooms; over one-half of their houses need paint, one-third of them need screen on their windows, one-fifth do not even have privies. More than a fourth of the urban households need toilets, many of them need more bedrooms, over one-fifth of the houses are in need of repainting.

Of white nonrelief families in four southern cities with incomes less than $500, over one-third had no indoor running water, almost one-half had no kitchen sink with drain, none had gas or electricity for cooking, none had central heating. Among southern farm families of the same income group, less than 1 percent had an indoor water supply, less than 3 percent had kitchen sinks with drains, 1 percent had indoor toilets, none had electric or gas cooking facilities, and less than 2 percent electric lights.

They need these improvements and they need household equipment. In 33 villages in the Southeast recently surveyed, a smaller percentage of families owned washing, ironing, and sewing machines and vacuum cleaners than families in any of the four other regions studied. Only 2 percent of the white families and 0.3 percent of the Negro families of these southern villages owned washing machines, as compared with 81.2 percent in the Pennsylvania, Ohio, Michigan, Wisconsin, and Illinois villages that were surveyed, and 77.3 percent in a similar group of California, Oregon, and Washington villages. While about the same proportion of southern white villagers had refrigerators as New Englanders, only half as many southern Negro villagers were as fortunate. There was an even greater disparity in these household equipment items between southern farm families and farmers elsewhere in the country. And southern farmers need equipment. They need implements, fencing, and fertilizer.

Northern producers and distributors are losing profits and northern workers are losing work because the South cannot afford to buy their goods.

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U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

MOBILIZATION OF FACTS ON WOMEN WORKERS

A Radio Talk

by

Mary V. Robinson, Director, Division of Public Information

Women's Bureau

U. S. Department of Labor

on the

Weekly Broadcast of Labor News Review

Conducted by Mr. Albert Dennis

W.J.S.V.

10.15 p.m., July 27, 1940

MOBILIZATION OF FACTS ABOUT WOMEN WORKERS

The public information division of the Women's Bureau is concerned with mobilization and distribution of facts about women workers. Mobilization connotes the use of forces for definite objectives. The objective of the Women's Bureau is to build up standards to safeguard women workers against exploitation, to break down prejudices concerning women's employment, to increase the efficiency of women as workers, and to develop opportunities for their profitable employment. This was the task assigned the Bureau by Act of Congress.

May I use an analogy? Just as mobilization for a defense program calls for the rallying of a variety of forces -- armies, warships, tanks, airplanes, industrial expansion, etc., so the Women's Bureau information service must take various forms to meet the varied public demands upon it.

The term "public information" as related to a Government agency, too often is not understood or is misinterpreted. Our public information work in the Women's Bureau is not for publicity or propaganda purposes. Rather it is educational work, and ties in closely with the problem of how a democracy can help the people meet their economic and social needs.

Let me be more concrete. Many people ask: "Why must women take paid jobs, especially when so many unemployed men are seeking work?" The reply is that the Women's Bureau finds in its investigations that many women, just as men, must have jobs to earn a living and oftentimes to support dependents as well.

How does the Bureau's public information division operate? This is a long detailed story, but let me give you a thumb nail sketch.

There are many problems pertaining to women as part of the labor force of the Nation. Women are engaged in all kinds of work — in all but 50 of the 534 occupations listed by the Census. The Bureau's reports on employment conditions of women oftentimes are of necessity, complicated and highly statistical. Reports of this type are needed by experts, such as other Government agencies administering laws, by employers, trade associations, trade unions, research workers interested in technical data.

But many other groups want facts about women workers for various reasons. Only these groups want information in simple, clear-cut, popular, and often in graphic, form. For example, individual wage earners need facts for use in their workers' education courses. Young people studying civics or labor problems in schools call on us for information. Women's organizations concerned with social and economic problems seek guidance from the Women's Bureau. All such groups in this age of popular presentations request that facts from the Government be in simple interesting forms.

And so our public information division translates technical data into a simplified story. This is not a wasteful function, but one that really prevents waste. It causes much more intensive and extensive use of valuable information collected by a Bureau such as ours. We use the various popular channels for disseminating our information. — We use the press to make announcements about available materials. We use periodicals whenever editors ask us to write articles on women workers. We prepare charts, maps, posters, exhibits in response to requests from experts in the field of visual education. We produce an occasional educational movie — our last one called WHAT'S IN A DRESS shows old problems in the dress industry and new ways of solving them. In the past three years this film has been shown at least 2000 times in all parts of the country.

We prepare simple and often graphic materials on such questions as State minimum wage and maximum hour laws for women, health and safety measures, married women workers, women's share in family support, household employment, to mention a few subjects of considerable interest at present.

How many times have I heard people say, "I didn't know the Government had so much helpful information." And so we try to let them know about our materials. For example, this week we sent out a news release on a new bulletin dealing with earnings of workers in the women's and children's apparel industry.

Then, turning to a very timely topic, this week the Women's Bureau also published a simple, clear-cut, concise report on women workers and the defense industries. As a result of a newspaper story about this publication we have had many requests for it — from industry, from labor, from periodicals, and from other Government agencies. When some individuals after reading about the report have come into the Bureau seeking jobs we have directed them to the proper sources — to the Civil Service Commission, and the Public Employment Service.

Several persons, after hearing of our report, have offered their services without pay to the Government in the defense program. Thus public information activities help to secure the cooperation of the public in programs sponsored by the Government. Our public information work operates on the basis of specific deeds to take care of specific needs. We believe that public information work is not just a job, but a public service. We realize that in a democracy an informed public opinion is essential.

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The following address was delivered by Mrs. Florence Kerr, Assistant Commissioner, Work Projects Administration, at a meeting sponsored jointly by the Women's Division of the National Democratic Committee and the Women's National Democratic Club, Wednesday, July 3, 1940.

WOMEN'S PART IN NATIONAL DEFENSE

This meeting is held in an hour which we all recognize as one of peril for civilization. And it is also an hour in which our country has begun the gigantic task of arming itself against gigantic dangers. As Americans, our hearts are in that work of self defense. And if we meet to discuss other problems and other tasks, it is not because we are ignorant of those dangers or indifferent to that task. It is, rather, because we have faith in the accomplishment by our nation of that task of self-defense. And it is also because we have faith in the survival of our civilization. We look forward, beyond this hour of peril, to the continuing progress of mankind.

Civilization may be said to have two lines of defense, an outer one and an inner one. An outer line of defense is one of armaments, of battleships and airplanes and of men who stand ready to give their lives for the protection of all that we hold dear. The inner line of defense is not so heroic, but it is none the less essential. For it consists simply of helping the work of our civilization to go on. In this work of helping our civilization to go on, I think you will agree with me, women the nation over will play an important and vital part.

Within the iron ring of our defensive armaments, we shall not cease to plant and reap. We shall not stop working in the fields of science or economics. We shall not forget our ideals of democracy, of human freedom, and of social justice. These are among the things American that we -- men and women alike -- are prepared to defend. These are among the fruits of civilization that we Americans are determined shall not perish from the earth.

All these things must now and henceforth be doubly dear to us. And we at this moment have the privilege of defending that inner citadel of our civilization. We need faith in order to carry on our work. I think we all have that faith. We need, too, a sense of the importance of what we are doing -- the feeling that we also serve our nation in doing our work.

We in this country not only believe that civilization will in the end triumph over tyranny -- we are determined that civilization shall triumph over tyranny. And so today the defense program of the United States is -- and quite rightly -- in the foreground of all our minds. The defense of our republic is now the great primary fact to which we must orient all our private and public plans of every kind.

And we who are concerned with the activities of the Work Projects Administration have to consider what effect our national defense program may have on our work program for the unemployed. What can we do to help along in national defense? And what need will there be for the help our program can give?

Owing to episodes of the past few weeks, the WPA is being viewed now in a new light. There are those who profess to see a speedy liquidation of the WPA. "Thank God," they say, "we can now be rid of the WPA." I heard the remark the other day that WPA was in the gutter. This is the antithesis of the truth. I say to you -- that WPA is not in the gutter but on the very front line of our inner defense.

We all know that men who have been long out of work are not effective citizens. If required to defend their country, they will not make effective soldiers. Men out of work lose their skills. They lose their health. And eventually, they lose their spirit, their morale, and their patriotism. Federal Security Administrator Paul V. McNutt in his Memorial Day address at Arlington Cemetery, called attention to the fact that, "Men are not eager to seize the sword to protect a jobless way of life. Nor are they willing to die for a country in which democracy means a bread line and soup kitchen."

There was once a great religious leader who changed the hymnal of his church. He wanted songs and music that people would enjoy singing. He asked: "Why should the Devil have all the good tunes?"

And we must ask ourselves, why should the Dictators have all the ideas as to how to keep their citizens busy and Democracies deny their citizens work, refuse them training, and offer them only the hope deferred that maketh the heart sick? Our American Republic can offer its citizens more than that. We can give all of them a chance to serve in the up-building of our civilization. It is not only a question of our immediate national defense. It is a question of our whole national future. We can give our people something to work for as well as, if necessary, something to defend.

The secret of Adolf Hitler's success in his campaigns of destruction, I think, may be answered by the one word, "unity" -- unity of thought, unity of direction, and unity of program. Underlying this complete unity is the philosophy of ruthlessness, brutality, force and aggression. Hitler is effective not only because he has a motorized army, but because he has a unified people and a unified economy behind him. Without adopting the Hitler philosophy, I think we can take a lesson from him on the subject of unity. When it comes to the defense of our country, 130 million Americans may think and plan and work and pray as a unit.

In America today we have 9 million unemployed. So long as we have idle men and idle capital, idle factories and idle mills -- we are falling far short of giving all our citizens a chance to serve in the up-building of our civilization. And we also are falling far short of reaching the total preparedness mark so necessary for our country to attain.

What the WPA has done and is doing to maintain and increase the working skills of a proportion of those 9 million unemployed is what we should have done and should be doing now on a considerably larger scale. The WPA has helped to keep its workers fit for whatever tasks they may be called upon to perform. And it is helping to maintain their faith in the Republic which we may all be called upon to defend.

The direct help that we can give to the national defense program is illustrated by the kind of help we have already given. A peace-time army of unemployed needy workers has been working for years on the improvement of our airport facilities throughout the nation. The fact that WPA has constructed 200 new airports and reconstructed 300 others gives us food for thought today. Look at the roads we have built. Are they important to our national defense? The answer is simple. Both airport and road-building programs are among those which will be given priority in our plans for national defense. We can do much more, however, than build airports and roads. I think we are equipped to handle virtually every type of work needed for national defense that civilians can do.

Now what are some of the services that our professional and service projects are prepared to render to our country in an emergency? The list is no doubt longer than many of you think. Do you know that we have 10,000 adult education teachers -- a large percentage of whom are women -- who could be transferred to literacy classes and classes in "Functions of Government and Americanization"? They are also prepared to give special services to foreign born. Our Recreation projects can provide immediate data on recreational facilities and leadership in any section of the country. And we could supply recreational leadership quickly in any concentrated area.

As a part of a food conservation program, we could very readily expand our gardening and canning projects. Thirty-six thousand workers -- again most of whom are women -- now employed on School Lunch projects and another 36,000 women workers on housekeeping aide projects are capable of taking part in food conservation programs and in the development of training for home gardens.

Our Housekeeping Aide projects could provide day nursery service for children of working mothers. These projects could supply nurses' aides also in large numbers. With a small amount of training by Public Health Departments, housekeeping aides would be equipped to do practical nursing.

We could expand all University Research projects having a bearing on military preparation. Record projects -- employing 85,000 workers (two-thirds of them women) in clerical type activities -- could immediately shift two-thirds of their employment to clerical or fact-finding service directly related to defense preparation. Projects providing tabulating units -- each with several hundred trained statistical workers -- could be made available in key cities for immediate service on any statistical study needed by agencies dealing with national defense. The WPA ranks here as elsewhere could be refilled and training could go on continuously supplying new workers as they were needed.

Now I might go ahead and talk at length about these community service projects of ours -- what they are doing and what they can do. But I want to raise the question with you -- since I know it will be raised in every community -- whether the work we are doing is a luxury when there is a great national defense program under way.

And the true answer, it seems to me, is that this work is a part of our national defense and it would be even if the whole world were at peace.

Will our nation be stronger if we drop our public health work?

Will our nation be stronger if millions of children sit hungry in school every day?

Will the nation be stronger if we cut down every kind of community service by dropping our WPA service projects?

I think these questions answer themselves.

But I want to go further and deeper in this inquiry. We have had a great depression, and the brunt of it has fallen upon the workers of the nation. They have been plunged into poverty and misery. Millions of them have been unable to find any work. I do not intend to recount the whole great effort of the New Deal to restore our economic system to proper functioning. But during this period it has been necessary for the government to cooperate with our communities in providing public work for the needy unemployed. For the last five years the WPA has been our first line of defense against poverty and misery.

In some other countries of the world, where no such internal line of defense existed, the poverty and misery of millions of workers went on until it had a grim result -- those who had nothing to lose followed the leadership of dictators and submitted themselves to the tyrannies which at least offered them food, work, and hope.

In this country the WPA has been the first line of our internal defense against joblessness, against despair -- and against dictatorship.

I think that the great and terrible lesson of contemporary history is simply this -- that dictatorships arise out of the festering swamp of human misery. Misery and poverty breed dictators. Misery and poverty are the opportunity of dictators. About half a century ago, an American poet wrote a poem about the Man with the Hoe -- a type of brutalized despair which we hoped did not really exist in America. He asked the question of what would happen "when this dumb terror shall reply to God after the silence of the centuries." Perhaps the Man with the Hoe has not yet spoken. But I think we have seen abroad what the terrible answer of despair is.

But there were some other lines in that poem that I wish to recall. One line asked "who shall rebuild the music and the dream" in that mind. Our nation has for seven years been engaged in a great task of economic reconstruction. We have been, in slow and patient and practical ways, rebuilding the music and the dream -- the music and the dream of America. We are not content to live on the bitter edge of poverty. Our work is far from finished. It has only begun. We are engaged in creating an America that shall belong to everybody --

to the old who have done their work, to the young whose work is still to do, to women and men, to workers and artists and scientists, to the whole American people. It will be a prosperous America, but it will be broad-based prosperity of the many, and not the fantastic jerry-built dream-pagoda Prosperity of 1929 that tottered into collapse because it was built on the shifting sands of misery.

The emergency of national defense is one which will not permit excessive slowness or overcautiousness -- we have seen to what disasters these may lead. National defense requires that we act quickly, and thoroughly. We have begun quickly enough, and I do not doubt the thoroughness with which we shall do the job. I believe, moreover, that the way we carry out our great task of national defense against external aggression will help to show us how to carry out our other great task -- our equally great task -- of internal defense against misery and poverty.

These two forms of defense go together. Neither one can be dropped. And neither need be slacked or slighted. We can go forward on both the outer and inner lines of national defense. And I think we must go forward.

We shall be told that in order to defend our democracy it will be necessary to rob the word democracy of all meaning for millions of helpless people. Do not believe it. Our advances in social justice, in economic democracy, in better working conditions, are not a luxury that we must give up. They are a part of the America that we are preparing to defend.

We shall defend out country by every means that modern science, mechanical ingenuity, human skill, and human discipline, courage and devotion can provide. We shall defend our country by keeping it a country that is dear to our hearts, and by making it a country ever nearer to our hopes and dreams.

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U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

A RADIO INTERVIEW OF

Mary Anderson, Director, Women's Bureau
U. S. Department of Labor

By

Mrs. Elinor Lee

Columbia Broadcasting System
W.J.S.V.
Washington, D.C.

March 3, 1941

Question 1. Miss Anderson, will you tell us just what the Women's Bureau is and what it does?

Answer 1. Briefly, the Women's Bureau is the one Federal Government agency charged with studying the problems and promoting the welfare of our women workers. The story of what the Bureau does would be a long one, if I were to give a full account of its work during my many years of service with it.

Question 2. How long have you been connected with the Women's Bureau?

Answer 2. Since its beginning in July 1918, but I did not become the director of the Bureau until 1919. The first year, I was the assistant director.

Question 3. Would you mind telling us how you happened to get into this type of service?

Answer 3. First, I believe it is of interest to tell of the dramatic origin of the Women's Bureau during the stress and strain of the last World War. How women at that time responded to the need to step into jobs vacated by men called to the front, is wellknown history. But less wellknown is the fact that Congress in 1918 created the Women's Bureau in the Department of Labor for the purpose of protecting the interests of women while their services were being used so extensively in the manufacture of munitions. The women did a fine job, after many of them got over being nervous because for the first time in their lives they had been put to work on big power-driven machines. The new Women's Bureau was authorized to formulate the necessary labor standards to insure the health, safety, and efficiency of the women as war workers. I was called on to help in the Bureau's program, because I had worked in industry for many years, as a machine operator in a shoe factory and as an organizer for the National Women's Trade Union League. Thus I had a first-hand knowledge of the problems of women workers. Then when the Bureau was made permanent after the war, to continue looking after the interests of the employed women of the Nation, I stayed on in this service.

Question 4. Just what is the scope of the Women's Bureau program today?

Answer 4. Perhaps I can give a better idea of the functions of the Bureau by mentioning certain things it can not do though some people apparently think such activities are a part of our work. The Women's Bureau is not an employment agency, but many women write to us for all kinds of jobs from running a typewriter to flying an airplane. Then not being a police bureau, we are unable to solve problems submitted to us in regard to wayward girls. Nor are we a matrimonial agency, nor a tracer of lost persons. Not long ago a young man in Georgia wrote asking us to help him find a nice Washington girl whom he might marry when he came here to work. Another letter from a New York man begged us to help him locate his wife who had deserted him. Then we are not a home economics Bureau, and so we are not equipped to supply inquiring housewives, with facts about how to balance their menus, or reduce their figures, or test the quality of fur coats. Just the other day, when the high wind and sand on F Street tore many women's silk hose into shreds, we had to disappoint a newspaper man who turned to us for the explanation. But we do refer all these various requests to the proper sources.

As it is, we have a pretty big job in our own field. We have to keep up with the many and varied problems of women as gainful workers. Today, there are between 12 and 13 million women in the labor force of the Nation, we are told by the Census Bureau.

Question 5. I don't quite understand what you mean by "labor force", Miss Anderson.

Answer 5. I mean all women who are employed or seeking employment - whether in industry, business, the professions, domestic service, or any other field. The Women's Bureau is concerned not only with the employment problems of these women but with all such questions in relation to the working women's responsibilities as home makers, as mothers, as breadwinners for a family, and as citizens.

Question 6. But how does the Bureau operate?

Answer 6. We are a fact-finding and a fact-distributing agency.

In short, we are the clearing-house and the authority in the country on all questions pertaining to women workers. We make many investigations of women in all the important occupational groups. We study their hours, their wages, and working conditions. We give special attention to their health and safety. We try to have the necessary steps taken to keep women from becoming injured while at work or from contracting occupational diseases, like lead poisoning for example.

We analyze the effects on women of new methods of work. We try to prevent discriminations against women in their wage-earning roles. We publish many reports on all these matters. And finally we formulate standards and policies to improve women's working conditions, to develop their employment opportunities, to increase - - - - - -

Question 7. Miss Anderson, may I interrupt to ask a question often asked me? Why do women, especially married women, take jobs when so many men are in need of work?

Answer 7. Because women, just as men, must earn a living in our world of today, and many women have to support dependents just as men do. Besides women engage in many types of work for which they are better qualified, and which men do not want, except perhaps as a stop-gap.

As to married women workers, our studies show that about 9 out of every 10 work because of economic need - often because the husband is ill, unemployed, or unable to earn enough. Many wives work to help raise the family standard of living to a health level, or to buy a home, keep children in school, pay doctors' bills, or support elderly parents.

Question 8. Don't you think the defense program will help to end discriminations against married women?

Answer 8. I hope so, but an occasional bill to restrict employment of married women is still being introduced into legislatures. Every effort should be made to defeat such undemocratic and unsound measures.

We know that the defense program is opening up more and more jobs to men. Also, some women in need of employment are now finding it. And in the coming months I believe a great many more women will get job opportunities, especially in factories making such consumer goods as cloth, uniforms, shoes, food, and many other articles necessary for men in the Army and Navy. Also, we shall need more women in the service trades.

Question 9. Do you think there will be a great demand for women to work in defense industries as in the last war?

Answer 9. Today's emergency is different. There is not the same need for women to take men's jobs. But I believe as the defense program speeds up, as the backlog of unemployed men dwindles, the need for employing women in defense production will greatly increase. Already, some women are now at work in factories making munitions, airplanes and other war materials. In fact, for certain of these processes requiring a sensitive touch, good eyesight, close attention to detail, and so on women are better than men. I firmly believe we should now be training more women along with men for defense productikn, so women will be ready when the demand comes. Many women are eager not only to learn how to perform skilled processes, but to acquire a general knowledge of industrial matters as a helpful background.

I wish also to stress the need to maintain good labor standards for both women and men during this emergency period. We must not allow the legal safeguards we have built up during many years to slip. But we must see to it that all Federal and State laws requiring moderate working hours and fair wages, as well as safe and sanitary work places are enforced. Such measures mean better workers, greater output, and a speeded up defense program.

Question 10. Miss Anderson, I understand that you are going to give a lecture on women workers and legislation at the American University at its Wednesday evening 8 o'clock forum this week to which the public is invited. Will you tell us something about this?

Answer 10. My talk is one of a series on the broad subject "The Status of Women in the World Today". I am glad to have such opportunity to discuss the value of labor laws, not only in promoting the welfare and progress of women but in building up our defenses in this critical period.

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WOMEN IN THE BATTLE OF PRODUCTION

by

Ellen S. Woodward
Member
Social Security Board

"Women will win the war" may not be a true statement. But "the war won't be won without women" is as true as it is alliterative. Without womanpower added to manpower, the democracies' struggle to perpetuate human freedom in the world would have little prospect of success.

Millions of British men have been released for combat units by women who have taken their places in factories and fields, on tube trains and trams, in thousands of jobs which were held only by men before the war. Women have donned uniforms and become regular enlisted members of the beseiged islands' armed forces.

In the United States, women are not yet running New York's subways or San Francisco's cable cars, and we have no need for women on firing lines, but we need them on the production lines and they are moving into them by the thousands. We do not have women at turret guns, but we certainly have them at turret lathes.

Many American defense plants are already employing women in jobs formerly labeled "for men only" -- and others are planning to do so. Women are being placed in factories which never before employed a woman, and even at jobs which, it was once believed, only the brawn of a man could perform. Women are operating machines, some light and some not so light. They are working as punch and drill press operators, power sewing machine operators, assemblers, inspectors, and packers. And they are helping to build airplanes, fashion parachutes, load shells, manufacture bullets -- tasks far removed from women's time-honored industrial occupations in textile mills and small article factories.

Recently women began to be employed on a large scale by California's aircraft industry -- in its fabric covering departments, as detail assemblers, and in such machine jobs as riveting, spray painting and welding. One airplane company estimates that almost a third of its workers will ultimately be women. California women are also finding places in the State's electrical industry -- doing light bench work, cleaning metal and plastic die castings, assembling electrical apparatus and soldering parts.

A Shreveport, Louisiana, electric motor company is using women as armature winders for the first time. Women are operating spot welding machines in a Massachusetts reflector factory. Former needle workers are making time fuses at the Frankford Arsenal in Philadelphia and rubber bullet-sealing fuel tanks for airplanes in Akron. One woman heads a scrap iron company in New Jersey and another is general manager of an electric plating works on Long Island.

All over America, the State employment offices report, the use of women in industry has risen and is continuing to rise. From January through August 1941, these offices filled more than 1,270,000 jobs with women workers -- 35 percent more than in the same period of the year before. About 245,000 of these jobs were in manufacturing plants -- an increase of almost 60 percent over 1940.

During the last World War the employment of women in proportion to men in some war industries rose all the way from 300 to 3,500 percent. Will such increases be made during the present emergency? Very possibly, because more and more women are enrolling in the free defense training courses throughout the country -- courses in machine shop practice, related drafting and blueprint reading, electrical and radio work, aviation service, and other occupations. Supporting the possibility, also, is a study by the Social Security Board of almost 3,000 occupations in a long list of defense industries such as aircraft construction, automotive manufacturing, metal working, electrical manufacturing, and even shipbuilding. It was found that in more than two-thirds of the jobs neither the degree of physical strength required nor the working conditions present any barrier to the employment of women. In the case of the more skilled jobs for which long periods of training are required, women will obviously not be employed in the near future. However, a large proportion of the jobs were of a kind in which women could be placed immediately, only a brief period of preparatory training, if any, being necessary. Yet only a mere fraction of these jobs have been open to women in the past.

The study will undoubtedly stimulate further the trend toward increased employment of women in jobs formerly denied to them. This is important not only to women but to all America, because many of these jobs for which women may be hired are in the vital airplane, shipbuilding, machinery, and other defense industries, where shortages of male labor are becoming increasingly serious. Women make up an important part of our industrial army, and they can play a decisive role in the battle of production.

This is not the first battle in which women have served. American women have fought beside their menfolk since the days when pioneers first began to carve a civilization from the continental wilderness. In our present struggle to save that civilization by out-producing the Axis powers, women have their greatest opportunity to serve their country and humanity itself. They are grasping that opportunity. They are serving the cause of freedom in a thousand ways. They are doing their share to attain that which will win America's battle of production: speed and efficiency.

Misc. 2546

WOMEN'S BUREAU
MAR 14 1941
DEPARTMENT OF LABOR

WOMEN

AND

NATIONAL DEFENSE

Zapoleon

Federal Security Agency
U. S. OFFICE OF EDUCATION
Vocational Division
Occupational Information and
Guidance Service

Washington
1941

WOMEN AND NATIONAL DEFENSE*

by

Marguerite W. Zapoleon, Specialist in
Occupations for Girls and Women

Defense against the insidious warfare of today requires action on many fronts. On most of them, American women are already busily engaged. They are serving in the armed forces of the country, in Government agencies, in industry, in schools and colleges, in women's clubs, and in volunteer organizations. A review of these areas of activity indicates how other women may serve as the need grows even more urgent.

Women in the Armed Forces

We usually think only of the men in the armed forces of our country, but besides the women who type and file and perform housekeeping functions in the Departments of War and Navy, there are 1,135 women serving as regular nurses in the Army Nurse Corps. An additional 450 reserves have already been added to the regular staff, and by July this number will be increased to 4,000. In the armed forces are also some 90 civilian nurses and 222 women medical technologists, working as dental hygienists, therapy aides, and dietitians. Much publicity has been given to the new hostess jobs in the Army, created as an innovation to supply a woman's service in connection with leisure-time activities in Army camps. But since 10,000 women applied for the 100 available hostess jobs, it may be well not to direct too much attention to this new opening for women.

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*Address before the International Association of Altrusa Clubs at the National Vocational Guidance Association's Convention at Atlantic City, New Jersey, February 21, 1941.

Women and American National Red Cross

Thirty-six years ago, the Congress of the United States chartered the American National Red Cross, authorizing it to perform certain duties, among them, "to act in matters of voluntary relief and in accord with the military and naval authorities as a medium of communication between the people of the United States and their Army and Navy". Today this great agency, so closely tied up with our Government, though supported entirely by voluntary contributions, has some 1,300 workers on its national staff, many of whom are women.

Most of the positions in national and local chapters are filled by social workers, although some public health nurses and a few nutritionists are employed. As the armed forces increase, there is likely to be a gradual increase in the number of such workers employed by local chapters.

Besides its regular staff, the Red Cross maintains reserve lists of social workers, nurses, and medical technologists who can be called upon in an emergency. For example, during the Mississippi flood of 1937, more than 1,000 "reserve" social workers were employed by the Red Cross, mostly on a loan basis from other agencies. While its reserve list of social workers and of medical technologists is adequate at present, the Red Cross is striving now to build up its reserve list of nurses to 40,000.

Volunteers, of course, form the greatest number of Red Cross workers and their activities are described later.

Women and National Defense Activities of the Government

Thousands of women are writing to Government agencies inquiring about Government defense jobs. These are filled through the usual channel of the U. S. Civil Service Commission, which has recently held or announced examinations, for the following workers who are quite likely to be women: stenographers, typists, card-punch operators, medical technicians, home economists, hospital attendants, occupational and physiotherapy aides, chemists, dietitians, translators, library assistants, bindery operatives, information specialists, telephone operators, junior professional assistants and student aides, junior statisticians, and others. As might be expected, the demand for additional workers has been particularly great in the clerical fields as the volume of work has increased in Government defense agencies. In March separate statistics on women workers in defense agencies will be available from the Civil Service Commission. During the past eight months approximately 176,833 Federal employees (both men and women) have been added in establishments designated "defense agencies" as of January 16, 1941.

A number of Government agencies have been active in suggesting how women can serve.

The Commission of National Defense itself has one woman member who directs consumer protective services. She has presented the following 7-point program suggesting what women can do on the home front:

1. Start a local radio news service to tell housewives the good and cheap food buys each day.
2. Start a school lunch program.
3. Work for low-cost ways of selling milk, fruit, and vegetables so that low-income families can get them.
4. Set up diet clinics where homemakers can bring their nutrition problems.
5. Support the food stamp plan.
6. If you have land, learn to raise food you can't buy and can it.
7. Urge merchants to sell Government-graded foods.

Along this same nutrition front, the Bureau of Home Economics in the U. S. Department of Agriculture has issued a diet pamphlet under the title "Eat the Right Food to Help You Keep Fit."

The Women's Bureau in the U. S. Department of Labor has concerned itself principally with the industrial front. As early as July, a labor advisory committee was formed of women representatives from the Women's Trade Union League and unions in defense industries, and, after consultation with this group, the Bureau issued a pamphlet on the "Effective Industrial Use of Women in the Defense Program," which outlines the working conditions which should be observed in the employment of women in defense work.

In November, after agents of the Bureau had visited forty plants working on defense orders for munitions, optical goods, and other products, a second conference was called at the Women's Bureau, attended by members of the Labor Advisory Committee, by the Women's Bureau Advisory Committee (composed of members of representative women's organizations), and by representatives of women's service clubs. This group urged the training of women in a number of skills, such as blueprint reading; micrometer, scale, and other gauge reading; knowledge of metals and cutting tools; shop mathematics and shop practice; types of training usually given to men. It also issued a list of occupations which trained women could perform in the emergency, which includes occupations in clerical and routing operations, in health services, in radio receiving and transmission, in food preparation and servicing, as well as such industrial occupations as machine operation; sheet metal work; assembly and bench work; drafting; inspecting; armature, stator, and coil winding; welding; optical goods operations; and tool cleaning and grinding. The Women's Bureau has also investigated the number of women available for work in defense industries at present, and, looking toward future needs by examining the past, has issued a list of occupations in which women substituted for men in the last war and statistics showing the increase of women workers during that period.

The U. S. Office of Education is responsible for the administration of funds appropriated by Congress for defense training. Although women as well as men were eligible under the law for training under the program which began last summer, the types of courses offered were those in which few women are likely to enroll. Here and there, however, women were admitted in local training courses in machine shop, welding, airplane ground work, drafting, etc. Altogether 595 women were trained by February 1, as compared with some 300,000 men. We should not forget, however, that there are approximately 50,000 girls enrolled annually in the regular federally reimbursed industrial and trade day classes. The greatest number of these take garment making work of some type, and it is not unlikely that clothing manufacture will eventually find a place on the official defense industry list and that these and other girls' classes will be financed from defense funds. The girls' vocational schools are already experiencing a sharp increase in demand for trained girls. For example, the Essex County Vocational School for Girls in Newark, New Jersey, and the Whitney Vocational High School in Toledo, Ohio, report shortages of power machine operators which they are attempting to meet by establishing extra training units. An increased demand for girls who have specialized commercial training is evident in both communities as is the demand for girls trained for light factory work. These trends will become more and more pronounced as the supply of male workers is reduced and as industries now held up for lack of tools and equipment attain capacity production.

Last fall special appropriations were made by Congress for the training of girls and boys employed on NYA projects. This training program will affect some 196,000 girls now engaged on such projects. Some 20,000 of them are already employed on work projects where they are gaining experience in operations useful in defense, such as radio repair, welding, sheet metal, and light machine operation.

It is interesting to note that while no girls have been trained under the rural youth defense training program, some 15,000 women are annually enrolled in day and evening federally reimbursed agricultural courses.

The Engineering Defense Training Program at the close of 1940 was offering 25 different types of courses in engineering colleges to train engineering helpers. While an occasional woman may be enrolled in these courses, the number is negligible. However, even in this field, one class at the University of Cincinnati has been organized especially to train women for aviation engine plant work in process and finisher materials inspection.

In aviation, too, women are seeking training. Last fall, 942 had completed civil pilot training courses, and 83 women are now taking courses in airplane mechanics.

The Work Projects Administration also has under way training projects for women. The training of some 50,000 institutional workers, who can serve as attendants in clinics, hospitals, and other institutions, has begun with the initiation of small classes of WPA workers at the Henry Grady Hospital in Atlanta and in two other hospitals. Twenty-eight thousand housekeeping aides will also be trained during the next year. A mimeographed publication on "Welfare Projects and National Defense" describes how WPA projects can help meet health, recreational, and other needs and suggests specific programs for local action.

Women in Defense Industries

Let us look again to the industrial front. While the list of defense occupations prepared by the U. S. Employment Service contains few in which women are customarily employed, the Women's Bureau has indicated those for which women are suited and can be trained. Women are already operating lathes, punch presses, and other machines. They are assembling parts and inspecting and folding parachutes. We even find them operating over-head cranes. And they are working as is their wont in their usual occupations in increasing numbers as men workers are drawn off for selective service or obtain work in the heavier industries.

Women's Activities in Schools and Colleges

Our schools and colleges, aside from their part in the training program already described, are eager to contribute their share to national defense. Teachers, most of whom are women, and school administrators will find suggestions in a publication recently issued by the Office of Education on "The School Program and National Defense."

Many women's colleges have undertaken defense projects. Russell Sage College, for example, has substituted for nonessential extra-curricular activities a program which requires each student to master one of the following emergency skills: elementary nursing, emergency feeding and nutrition, aviation, auto and ambulance driving and repair, elementary business knowledge and skills. In addition, the physical education program is being expanded, forum and radio discussions of defense issues are being arranged, and opportunity is given students to participate, if they wish, in activities of war relief organizations.

Keuka College is offering five new courses: first aid, emergency rationing, home hygiene and care of the sick, emergency recreational and leisure-time leadership, and personal relationships in national emergency.

Simmons College has a faculty committee to survey its own professional schools to see what assistance it can offer in the emergency.

Women's Organizations and Defense

Women's organizations have risen characteristically to the occasion in all manner of ways.

Among the professional groups, the American Home Economics Association is polling its 15,000 members to register their availability and their special skills. The New York State League of Nursing Education is surveying 100,000 registered and practical nurses in New York State and is arranging refresher courses for them as needed. The American Library Association has issued a memorandum on how librarians can serve defense needs.

The Business and Professional Women's Club is tallying the vocations of its 73,000 members as are also Altrusa International and the American Association of University Women. The latter organization is recording not only the vocational and avocational abilities of its members, but also the housing and sewing facilities they might make available in an emergency. A code for volunteer workers published last May by the AAUW is especially applicable to those who plan to contribute their services in defense work. The general director of the AAUW, after consulting the Adjutant General's office, has addressed a letter to branches situated near Army camps which suggest that they offer their services to the camp commander in organizing a local civilian committee to assist in furnishing housing, recreational, and welfare services outside the camp organization. Like many other organizations, the AAUW plans to discuss pertinent defense problems in its discussion groups and has already issued a pamphlet for the social studies discussion group which describes the national defense set-up. A leaflet called "Today's Challenge to the American Association of University Women" suggests how members can contribute to national defense.

The General Federation of Women's Clubs, in addition to urging its members to back their community welfare programs and aid the Red Cross, has been active in promoting the appointment of women on State and local defense councils. So far, it has representatives on ten of the State councils and on hundreds of local ones. The Federation is stressing hemisphere defense by encouraging scholarships for Latin and South American students and urging the compulsory teaching of Spanish in our public schools.

The National Women's Trade Union League is devoting all of the March issue of its Life and Labor Bulletin to the subject of defense and is urging action on the housing front.

Representatives of these and many other organizations met at Vassar College recently to discuss defense activities of women's organizations.

Volunteer Organizations

Finally, women are volunteering their services to organizations especially designed to utilize them.

Chapters of the American Red Cross have enrolled 800,000 women volunteers who are making garments and surgical dressings, knitting, teaching short-term courses, or assisting in other ways.

A new organization, the American Women's Voluntary Services, patterned after the Women's Voluntary Services in Great Britain, has enrolled more than 10,000 women in 16 States who want to learn how to cooperate efficiently with policemen, firemen, and social workers in times of emergency. With the aid of the Red Cross, courses are offered in first aid, air raid and war gas work, evacuation procedures, home nursing, diet and canteen, communications and auto transport and repair, and map reading.

Somewhat more military are the Green Guards of America, organized to serve as women auxiliaries with posts in many parts of the country. Their courses include drill, rifle, and pistol shooting; air-raid precautionary work; ambulance driving and servicing; and other types of services women may be called upon to perform in time of war.

The Women's Defense Cadets are drilling in New York with the purpose of preparing themselves physically to meet efficiently and in an organized way war-time emergency situations. Similarly, in a number of cities, members of the Women's Hospital Reserve Corps of the American Women's Hospitals are being trained in drilling, rifle practice, first aid, and the care of the sick.

Relief Wings, Inc., has been organized to recruit women aviators for service in emergencies.

In a number of cities, women have arranged for city-wide voluntary registration of women for home defense volunteer work. In Troy, New York, the Volunteer Bureau of the Troy Council of Social Agencies has a file of cards of some 5,000 women who registered voluntarily during two days in December proclaimed by the Mayor for the purpose. Schools, factories, churches, and offices were used for registration and 100 women's clubs cooperated. As a result, training classes are being conducted in nurses' aide work, motor corps work, radio work, canteen work, food conservation, typing, recreation and public speaking. Similarly, in Pasadena, California, an "R-Day" was planned.

Ingenuous methods of raising money for British, Greek, and Chinese war relief agencies and the Red Cross include the successful Westchester plan of collecting and selling scrap metals.

Perhaps, even in this necessarily limited account of the variety of defense activities women are engaged in, one can observe obvious signs of duplication, which time and better organization will eliminate. But the enthusiasm and eagerness with which American women are seeking to serve augurs well for our national defense. For no matter how well prepared are the front lines of defense, upon the women of the country depends to a far greater extent than their numbers indicate, that all-important spirit which, in times of stress, we term morale.

DO NOT TAKE

For release
July 13, 1941

U. S. Department of Labor
WOMEN'S BUREAU
Washington

(2417)

WOMEN AT WORK

Special Feature Service
Mary Anderson, Director, Women's Bureau, U. S. Department of Labor

No. 5

TWENTY-ONE YEARS OF THE WOMEN'S BUREAU

As you tear off the calendar page you notice that it is July and the beginning of another fiscal year. Ordinarily this isn't anything to remark about, for fiscal years and the like have only to do with the bookkeeping end of government. But this time you pause. The completion of the fiscal year of 1940-41 marks the end of the first year of the Nation's defense program. And incidentally it brings to a close 21 years of activity by the Women's Bureau in the U. S. Department of Labor.

Perhaps it's only natural at a time like the present to recall circumstances surrounding the establishment of the "Woman in Industry Service", the forerunner of the Women's Bureau. It was 1918 and the country was calling on its women to take over jobs in war industries. Many of them had little or no experience, but they tied up their hair, improvised uniforms, and presented themselves at factory gates to do the work of the men who had been mustered into military service. Soon it was obvious that the recruits needed particular attention, and so this special governmental unit was created to safeguard their welfare.

Well, all of that happened more than 2 decades ago. But it might almost be today, there are so many similarities. Once more the need is for workers to make shells, build planes, and the other things essential to a defense program. And once more the Women's Bureau is doing all in its power to see that women workers are used intelligently and with due regard to their health and safety.

In fact, judging from its recent reports the Women's Bureau went into action almost the moment the defense program was launched. Its storehouse of information on what women workers did during 1917-18 was ransacked and after being annotated was made public. A Labor Advisory Committee composed chiefly of women representatives of key unions in the defense industries was appointed and has kept the Bureau apprised of significant developments on the various industrial fronts. Intensive investigations by Bureau representatives of plants making machine tools, instruments, munitions and firearms, of aircraft factories and of government arsenals, have yielded all kinds of valuable data on what women workers are doing and what they can do when the need arises. Several special bulletins recommending labor standards, safety clothing and other precautionary measures for women workers in defense industries have been issued.

The Bureau was established as a permanent agency in the United States Department of Labor in June 1920 and vested with authority among other things to investigate and report upon all matters pertaining to the welfare of women workers, to formulate standards and policies to improve their working conditions, increase their efficiency, and to develop their employment opportunities.

The Bureau has made studies of the wages that women receive and the hours that they work in well over half the States, the District of Columbia, Hawaii, Puerto Rico, and the Virgin Islands, always at the request of the State authorities. In addition extensive studies have been made of various industries which employ great numbers of women workers. Such important surveys include those on textile, many branches of clothing manufacture, millinery and shoe industries; various types of food manufactures, notably slaughtering and meat packing and canning of all types; radio and automobile industries; tobacco and cigar factories; plants making electrical, metal, chemical, and paper products; laundries and dyeing and cleaning establishments; hotels and restaurants; stores and beauty shops. Also women as white collar and professional workers have come in for a considerable share of the Bureau's attention.

The record also shows that the Bureau's findings have helped to bring about the passage of State laws pertaining to maximum hours and minimum wages. Of the States surveyed by the Bureau, at least a dozen or more, the District of Columbia, and Puerto Rico have reduced legal maximum working hours for women, enacted or revised minimum-wage laws, or used the data collected to help in setting wage rates.

There is an interesting story in this connection. In 1931 the Women's Bureau made a study of the sewing trades in and about the State of Connecticut. All kinds of unfortunate conditions in the garment industry came to light. In a few of the Connecticut factories a new twist had been given to established "chiseling" tactics, by employers using so-called "learners" for several weeks without pay, then dismissing them and hiring another group of "learners" to take their place. This exposé created a stir, and in 1933 Connecticut was 1 of 7 States to pass a minimum-wage law in that year. Later Connecticut reduced its maximum hours of work for women to 48 a week. In the years that have followed many other States have regulated working schedules and minimum wages of women workers.

In July 1918 only 12 States had a minimum-wage law for women. Today 26 States, the District of Columbia, Puerto Rico, and Alaska have such a law. Back in July 1918 only 3 States and the District of Columbia had legal maximum hours for women of 8 a day and 48 a week. At present such regulations or better are found in 18 States, the District of Columbia, and Puerto Rico.

In 1918 there was no such Federal legislation as the Fair Labor Standards Act of 1938. When it was being considered by Congress, data collected by the Women's Bureau stressed the need of such a Nation-wide law for women employed in interstate industries.

The next thing to catch your eye is the attention that the Women's Bureau has given to the physical conditions under which women are working. Much information from various investigations has been accumulated. In some instances results have been secured on the spot. For example, a study was made in cooperation with the U.S. Public Health Service concerning the insanitary drinking fountain. During the course of this survey it was found that one factory owner had put in the wrong kind of fountain at a cost of $16,000. It was pointed out to the manager that this type of fountain had been responsible for an epidemic of streptococcus infections at the University of Wisconsin; and the insanitary equipment was promptly removed and replaced with a safe type of fountain. Another example is furnished by a survey of vitreous enameling of stoves, refrigerators, and automobiles, which is liable to cause lead poisoning. Thus the Bureau made certain definite recommendations in the interests of women working under such hazardous conditions. It was pointed out that 2 of the plants inspected bought their enamel from a firm making a specialty of leadless cast-iron enamel. This very good type of enamel at the time of the study was still not being used extensively in the United States, although it was sold widely in England where regulation concerning the use of enamel with lead is strict.

Though the Bureau is not empowered to enforce any laws, it has felt a keen sense of responsibility for the successful administration of labor laws pertaining to women. The story of the 21 years is filled with evidence of the Bureau's keeping up to the minute as to various new procedures and techniques in this field, and serving as a clearing house on such matters. Every year in Washington a conference of minimum-wage administrators is held to discuss mutual problems and exchange ideas. Last year a series of Regional Conferences of Minimum Wage Inspectors was inaugurated.

The Bureau has also felt keenly the need to advance the opportunities for profitable employment of women workers and from time to time has made studies and vigorously urged measures which would bring this about. Special consideration has been given to the problems of the Negro women workers; and to the lack of standards in the field of household employment. The Bureau has been most outspoken in its opposition to the movement to curtail legislatively or otherwise the employment of married women. Its surveys reveal the economic need behind the job seeking of the vast majority of married women workers.

This is by no means a comprehensive summary, but it does give you a glance back over the 21 years since the Women's Bureau was established and reveals the progress that has been made for women workers. It shows that each turn of the economic cycle has brought new problems to be understood and solved. And each time—during the last World War, the subsequent period of adjustment, the depression, the New Deal program—the Women's Bureau has shaped its activities to meet new problems in the most practical way possible. What the future holds for the wage earner, no one knows, but somehow you feel comforted and encouraged by the knowledge that this agency will continue to safeguard the interests of women in the present emergency.

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Page 3

OFFICE OF WAR INFORMATION
Executive Office of the President
Office for Emergency Management

COPY

CONFIDENTIAL

September 14, 1942

To: Mr. J. V. Fitzgerald
Director of Information
Department of Labor

From: John R. Fleming, Chief
Bureau of Publications and Graphics

Subject: Proposed Address by Miss Mary Anderson, Director of Women's Bureau, Department of Labor, "Women on the Labor for Victory Front," to be given in San Francisco, California, September 20

The proposed address, submitted in conformity with the White House directive on speech clearance, seemed to raise questions within the responsibility of the War Manpower Commission, to whom it was forwarded.

On page 2, paragraph 2, the War Manpower Commission requests use of more recent figures, which would make the paragraph read as follows:

> "It is estimated that already 14.3 million women are in employment of all kinds — about 3 million more than at the beginning of the defense program in May 1940. There are still somewhat more than 800,000 unemployed women seeking jobs. Only about a fifth of the employed women are on war jobs — but we expect around 4 million to be so employed at the close of this year."

We are also passing on two suggestions for bringing statements more in line with War Manpower policy which Miss Anderson may or may not wish to use. On page 3, the emphasis on the WPA nursery school program would be more accurate if stated as follows:

> "The War Manpower Commission has issued a directive to the Defense Health and Welfare Services to coordinate, integrate and develop programs for day care of children of working mothers. Several federal agencies — WPA, Farm Security Administration, National Housing Agency and the Children's Bureau — are already carrying on programs in this field."

The War Manpower Commission feels that the Bay area should be reminded forcibly and frequently of the error of its ways in discriminating because of race and color. The remarks which the Commission feels might be stronger are on page 5.

The address is approved for delivery as planned regardless of whether or not Miss Anderson accepts these suggestions. However, if changes are made, we should appreciate knowing what they are as a confidential copy of this address has been turned over to our Overseas Branch for possible use abroad.

U. S. Department of Labor
WOMEN'S BUREAU
Washington

WOMEN'S CLUBS AND WOMEN IN INDUSTRY
10 Points for Program Guidance

ADDRESS BY MARY ANDERSON, DIRECTOR, WOMEN'S BUREAU, U. S. DEPARTMENT OF LABOR
BEFORE THE GENERAL FEDERATION OF WOMEN'S CLUBS
NATIONAL BOARD OF DIRECTORS
CHICAGO, Oct. 17, 1942

I think of the General Federation of Women's Clubs, representing more than 2,000,000 women in thousands of clubs over the country, as a key factor in winning the fight we are waging and must continue to wage on the home front. Your president has asked me to talk to you on how you may best cooperate in the wartime program of women in industry. That is certainly not a difficult request, for two reasons:

First, because I realize that you, as leaders of women on the national, state, and community levels, have the energy, the vision, and the necessary organization to translate your resolutions into action. Second, because there is a clear opportunity for you to render a vital war service comparable to the service which men and women on direct war production and in combat duty are rendering. I shall go into that at some length.

But for the next few minutes I would like to give you a brief background picture of women in industry and the place of the Women's Bureau in that picture. Since the beginning of the defense program in 1940, three million women have been drawn into employment, and it is estimated that some 15 million women will be at work by the end of this year. Of this number perhaps 4 to 4½ million will be on war work.

The rise of woman employment in war industries is dramatically illustrated in the aircraft industry. Only 4,000 women were employed last December in aircraft plants, but so well have women performed that their numbers had skyrocketed to 63,000 by August of this year.

The Women's Bureau has paced right along with these women industrial pio[illegible]ers. Long before employers were generally ready to accept numbers of women in [illegible]ircraft, our field agents visited the major aircraft assembly plants and analyzed occupations suitable for women. Just the other day we released a second and more comprehensive report on women in the aircraft industry, and this time it was done in response to the many requests from manufacturers as to women's jobs and work standards.

Yes, the men are learning fast these days! I read in the paper recently where an executive made the comment that women take to aircraft production like a duck to water. That is only an example of the comments we hear every day.

In the ammunition industry also great numbers of women are employed. There are many jobs of a repetitive nature to which women are readily adapted after brief training. Another thing, there was some previous experience in this industry with production workers, as they had worked for years in the Government arsenals. But rapid expansion of the industry brought new problems.

Again, the Women' Bureau was on the spot analyzing occupations and making recommendations as to how more women could be used. Our reports on small arms and artillery ammunition followed the same pattern as in aircraft, and have indicated that women can do nearly any job where the work is not too heavy.

We have made similar studies of the instruments, machine tool and firearms industries, and now we are getting requests for information from shipbuilding, mining, and many other war industries. Just last month I visited the Kaiser shipyards in California and was told they are taking on women as fast as they can get them.

Exclusive of the key war industries, women have converted their skills to work on war orders in many consumer goods industries where they help turn out tanks, gas masks, shoes, uniforms, and countless articles. In the refrigerator industry, for example, women make parts for artillery ammunition. In a watchmaking factory they are making time fuses for bombs. A plant that made vacuum cleaners now employs women to make gas masks. Women in the rubber industry work on rubber landing boats for the marines, and flotation bags for planes forced down at sea.

Women are also moving up into many civilian jobs which they never held before, to any extent. They act as bank tellers and dispatch clerks at airports, for example, and a demand for women in professional jobs has been reported by some 100 colleges and universities.

The significance of women as a source of labor supply has been stressed by President Roosevelt. Their work has been indorsed by the War and Navy Departments, by the Manpower Commission, and the War Production Board. It has been indorsed in a strong statement by the president of the National Association of Manufacturers, and by leaders of trade unions. The War Labor Board in a recent important case, set a wage policy that "women who perform work which is the same in all material respects as that performed by men shall receive the same wages as men."

So, you see, in some respects, women have come a long way in their integration into the war production program. Yet a great many factors are involved in this integration, and not all of them are directly connected with women on the job, but rather with their well-being as workers and citizens. The Women's Bureau, from its long experience with the working and living conditions of women workers, dating back to World War I, foresaw many of the problems incident to women's large scale participation in a rapidly evolving war economy. The President's call for great numbers of tanks, planes, guns, and ships plainly forecast the ultimate role of women in industry.

With this in mind we have made a number of community surveys to determine the working and living conditions of women drawn into the war effort. The results of these surveys give me a definite background in recommending to you ways in which you may cooperate with war problems in your communities and cities.

Our surveys fall into two general groups, those in rural or small town areas where war plants have been constructed, and those in cities reporting labor shortages. In the first group I have in mind a mid-western town in the corn and cattle country, composed to a large extent of farm families.

The sudden impact of war industry, felt by the influx of thousands of workers attracted to a huge new powder plant constructed a few miles out from town, posed a knotty set of new problems on the community. It was a trying period of adjustment for all concerned. Some of the permanent residents seemed resentful toward the industrial workers who crowded the stores, groceries, restaurants, banks and movies.

Many of the workers drawn into this area were women, some of them girls away from home for the first time. They were hampered in their attempts to make normal living adjustments in new surroundings because there seemed to be no place for them in the life of the community. Dormitories for the girls were built outside of town and 8 miles from the powder plant. The nearest eating facilities were several cross-roads drive-in shops, and from what I have heard the specialty was not food but juke box music. Two of the shops had been declared unsanitary because of inadequate sewage facilities.

The girls had no other places to eat. Busses taking them to and from work were on a schedule that did not allow time for meals in the plant cafeterias. Production lines were not near the plant cafeterias, so for the mid-period meal they had cold sandwiches put up by the cross-roads shops.

Busses taking the girls to work were sometimes so crowded that it was necessary to stand up during the 8-mile ride. Crowded busses passed them by at times and they had to hitch-hike.

As for recreation, the U. S. O. had set up facilities but no transportation was available to and from the recreation centers and the dormitories. The girls were not "taken in," as the term goes, into the recreational life of the community.

Our survey also brought out that no sick rooms existed in the dormitories and that the town's only hospital cared for nearly twice its normal capacity at the time a check was made.

I have purposely described these circumstances in the past tense because some of the problems have been cleared up or are in the process of adjustment. But you will find similar problems in a number of other communities, and I cannot overstate the close relation of such social conditions to the success of the war effort. They bear directly on the morale and health of workers and the labor turnover which is retarding all-out war production.

A woman's organization, imbued with a sympathetic understanding of women's needs, can offer leadership in solving such community problems. To my mind this constitutes a very real war service. Woman representation on local, state, and national planning committees and on local defense councils should be urged. Once it is gained this representation should manifest itself as a positive force.

Your position as an organization and as individuals forecasts your increasing influence in public affairs. Your help has been enlisted in the administration of Government programs such as rationing and salvaging. It is a natural development of your community responsibility that you help formulate policies promoting the welfare of working women. Yours is the opportunity of easing the impact of war on workers and communities.

I might suggest here that individual members of your club can do much in breaking down community prejudices, particularly in renting rooms in their homes to women in the areas where housing shortages exist. This would undoubtedly influence the the attitude of other housewives to put aside personal preference in renting rooms only to men. If there is a room registration office in your community find out what proportion of the rooms can be rented by women.

Some of you may ask, what of the areas where appeals are being made to the local housewives and mothers to take war jobs? This question suggests some very serious problems, but we are meeting them, and we are relying on a great deal of help from the local areas in which the problems exist.

This brings me to a discussion of our surveys in urban industrial centers. Some of these centers have reached the saturation point in the housing of war workers. At the same time men are being drained off for service in the armed forces. Local women are being asked to take jobs in order to meet the labor supply needs so that further recruitment of outside workers may not be necessary.

This means reaching into the homes for housewives, many of whom have no industrial experience. It means in some cases asking mothers to make arrangements for the care of their children so that the mothers can take factory jobs.

There is said to be a nded for women to join the war labor force in certain industrial areas in Ohio, Pennsylvania, Oregon, Maryland, Michigan, Connecticut, Wisconsin, Texas, Indiana, Illinois, California, Delaware and so on. Other needs will develop. But there is no Nationwide need for a general exodus of women from their homes to production lines. There is no State-wide need for a general exodus of women from their homes to production lines. There are specific needs for additional women workers in certain localities. The labor supply picture, you see, is a series of peaks and valleys. Detroit is a peak city, for instance. The need for workers and the shortage of housing have matured as critical problems at the same time. It is said that 80,000 local women may be needed so that the demand for workers can be satisfied without further agitating the housing problem. A voluntary registration to inventory the woman labor supply in the Detroit area has already been he

I should like now to outline conditions in another industrial city many miles from Detroit which our agents visited recently. Employers in this city are turning to local women. Many girls have already come into the city from nearby States. Even when the available local women are placed it is expected that more than 4,000 women must be brought in from the outside.

Authorities say that housing for unattached women is imperative. Of 900 vacant rooms listed at a room registration office, not more than 35 were available to single women. No city ordinance covers lodgings. This is reflected in the housing conditions. Five girls were reported sleeping in one room for which they paid $5 a week each. In another instance ten families in a 2-family residence paid $200 a week rent with no extra facilities.

Apparently much attention has been paid in this city to recreation for industrial workers and for service men at a nearby airfield. Picnics, dances, and games are part of the program. Twice a week dances are sponsered for workers on the swing shift who leave work at midnight. Taxi service home from the dances is provided for the girls by the U.S.O. Fortunately the program of recreation for women workers seems well planned and administered.

What conclusions must we draw from a composite picture of the living conditions of women war workers? The descriptions I have given of rural and industrial areas point to the same general problems to be looked for in your communities, namely housing, food, transportation, and recreation.

These are the four cornerstones of community problems and they are all problems whose solution lies partly within the scope of such an organization as the General Federation of Women's Clubs. It is a challenge to you to help women workers, the Government and your own cities and towns by full participation in this kind of war service.

Returning to the subject of labor shortage areas, there exists the problem of care for children of working mothers. Where all sources of labor supply have been utilized and mothers with young children are asked to take jobs, they should be placed on the day shift and should receive such assistance from the community for child care as may be necessary. I need not emphasize that the same consideration should be shown the mothers who find it necessary to work.

When mothers leave their homes to work it creates many problems. Even if care for children is provided during working hours, there is still the burden of household duties. One solution appears to be community kitchens where whole families can have their meals together or where prepared food for hot meals can be taken home for the family. In this way the mother can meet her multiple obligations.

When calls go out for recruitment in industry of mothers with young children, it may well behoove a woman's organization to investigate the facts to be sure that other women who may be qualified and registered for work are not being passed up by employers.

Much could be done to promote the woman 40 and older who may be discriminated against in her attempts to find employment. We know from our investigations in the Women's Bureau that employers usually prefer younger women. Some employers have not considered that the older woman often has fewer home responsibilities to tie her down. Her mind is free to concentrate on the job. She has judgment and stability and is sometimes a better a worker than very young girls.

The Negro woman is another subject of discrimination. I need hardly mention the unfairness of such an attitude. There is no sound reason why Negro women should not take industrial jobs and I am glad to say that this discrimination is breaking down in some plants.

In addition to discrimination in the recruitment of women workers there are some aspects of woman employment in the war industries which I would like to touch on briefly. Many women must be trained for their jobs and others for upgrading to better jobs. The elementary training, as you know, is usually given on the job. But a check with local training officials may reveal how women in your community are faring in their opportunity for the more advanced training.

There has been talk recently in some quarters that in the interest of the war program workers should make sacrifices in regard to labor standards. On the contrary, there should be a floor under work standards below which they cannot go if we are to keep up the morale of workers and prevent the labor turnover and absenteeism that go with fatigue. Ond of the strongest planks in this floor should be a maximum 48-hour work week for women, with no long hours of overtime and with one day of rest in seven. The principles of the same pay rates for women as for men and equal opportunity for training and advancement are important factors in morale of women workers. In cooperating to see that fair work policies prevail for women in your local industries and on the national level, you will be perfecting that democracy which we are dedicated to preserve.

I am often asked, At the close of the war what is to become of all the women who have joined the labor force? The answer lies within the compass of the Atlantic Charter. The question may answer itself if we follow President Roosevelt's creed of the four freedoms. Freedom from fear, freedom from want -- in these two we have the solution in the postwar period of the adjustment of women as well as men.

Millions of women in this country have always earned their own living. Many of them support dependents. Vigilance must be exercised to see that women who have stepped so willingly and heroically into war work today, women who have left their homes or abandoned peacetime pursuits, are given their due chance at freedom from want. Women who have made their sacrifices for victory and democracy must not be accused of taking men's jobs as they were at the close of the last war when soldiers were mustered out of military duties back to their civilian jobs.

In closing I should like to summarize the points I have recommended to your attention. They may be referred to as 10 Pivotal Points in your cooperation with the war program of women in industry.

In the general community problems are four points: Adequate housing, food, transportation, and recreation for women workers.

The fifth point is household assistance, possibly in the form of community kitchens, for mothers with young children when the mothers are drawn into industry or find it necessary to work.

The next four points deal with the recruitment and working conditions of women. These are: breakdown of discrimination against older women and Negro women, reasonable hours of work, fair wages and training opportunities for women workers.

The tenth point relates to the post-war period I have just mentioned. I am sure the General Federation of Women's Clubs will not only render valuable war service in preserving democracy, but in easing the transition for women workers from war to peacetime economy.

(WO 42-151)

U. S. DEPARTMENT OF LABOR
Women's Bureau
Washington

WOMEN ON THE LABOR FOR VICTORY FRONT

A TALK BY MARY ANDERSON, DIRECTOR, WOMEN'S BUREAU, U. S. DEPARTMENT OF LABOR, AT THE CONFERENCE SPONSORED BY LABOR'S UNITY FOR VICTORY COMMITTEE, SAN FRANCISCO, SEPTEMBER 20, 1942.

It is a rare privilege to be with you today -- to express my appreciation of your constructive program and to participate in the discussion. You are to be congratulated for joining forces to achieve victory through unity. Also I am heartened by this gathering convened for the definite purpose of promoting the most effective employment of women in war industries.

For long years I have been a member of the labor movement -- I have realized labor's important stake in the development of democracy in industry and democracy in Government. As director of the Women's Bureau for more than a score of years--I have worked at the task of promoting the welfare and advancement of women workers--that has been my special concern -- my part in both the labor and the woman movement.

I believe we can take heart today at certain achievements that are like bright rays breaking through the dark clouds of war. We can feel encouraged at the greatly improved standards for both men and women in industry. We can be proud of labor's heroic victories in the battle of production. We can feel cheered at the recognition by many men -- among both management and labor -- of the need and value of women as recruits on the industrial fronts.

Employers' opposition to women in some industries is rapidly crumbling. Such opposition has been due to the mistaken ideas that women had little if any mechanical ability -- that they would create problems of discipline -- that they would necessitate plant adjustments.

Where trade-union resistance to women as co-workers and co-members has existed, this too is disappearing. It was based largely on men's fear of replacement by lower-paid women. The use of women as cheaper labor is not the fault of women but of a tradition that must be uprooted and cast out for the good of all.

The Women's Bureau finds, from its occupational studies in various industries, that women can do many jobs as well as men. Women soon learn to make careful adjustments at high speeds -- with great accuracy -- to work to precise tolerances, as fine as a thousandth of an inch. Women have proved themselves capable of operating almost any kind of machine. With training,women become competent at such skills as blue-print reading; use of gages, micrometers, calipers; women can acquire and apply a knowledge of shop mathematics -- of the feeds and speeds of machines -- of the qualities of metals. Many women make excellent job instructors and supervisors, especially for women workers. In fact women can do practically any type of job if and when needed, provided the work is not too heavy.

It is estimated that about 14,000,000 women are in employment of all kinds--about 3 million more than at the beginning of the defense program in May 1940. There are still somewhat more than 800,000 unemployed women seeking jobs. Only about a fifth of the employed women are on war jobs -- but it is estimated that from 4 to 5 million will be so employed at the close of this year.

In our war plants thousands of women are now helping to turn out planes, tanks, guns, ammunition. In other factories thousands of women are at work on uniforms, shoes, parachutes, gas masks, electrical goods, instruments, to mention just a few of the great variety of war materials in the production of which women have a share. In the offices and laboratories of industry and Government large numbers of women are in action as clerical brigades and technical corps. On the farms more and more women are helping with the crops. As professional workers, growing ranks of competent women are releasing men for other duties.

Continued adjustment of the Nation's manpower and womanpower must be made if we are to meet production and military demands. Additional women will be transferred from civilian employment to war work and a considerable number of housewives will be recruited. Women who are homemakers, particularly those with small children, should not be asked to go into factories until absolutely necessary. They can be much more helpful to the Nation by staying in the home and taking care of the family. Too often when such women secure employment they tend to become unduly fatigued and unable to render real service in any capacity. But even now, in certain areas with both labor shortages and housing shortages, local women with children under 10 and 12 years of age are responding to the call to help in war production. The War Manpower Commission has issued a directive to the Defense Health and Welfare Services to coordinate, integrate and develop programs for day care of children of working mothers. Several federal agencies -- WPA, Farm Security Administration, National Housing Agency, and the Children's Bureau -- are already carrying on programs in this field.

Almost overnight your own State has shifted to a different economy, with many industrial and social complications. Women have been inducted into industry on a large scale. In June 76,000 were employed in manufacture. Durable goods accounted for 29,000 -- a 50 percent increase in two months. What additional roles in industry can women assume? How can more women be used effectively on the industrial fronts without disrupting their vital work as mothers and homemakers on the home fronts? What is organized labor's responsibility in the setting up and carrying out of the whole program?

One of the most amazing achievements in the country is the rapid and successful influx of women into the aircraft industry of Southern California, where women increased from 500 on production lines in February to 18,000 in June in a wide variety of operations. This development may well point the way to the shipyards of your own area in their challenging need for many more workers. Last May an Employment Service official estimated the number required by the end of 1942 to be 75,000. Recently Admiral Land of the United States Maritime Commission declared that, "Nearly every great war in history has been won primarily in the shipyards of the victorious Nations."

What are women doing and what can they do to help build ships? To date, in the Bay area women have been employed to slight extent in private yards, but have been at work for a longer time in the Mare Island Navy Yard.

An Oregon company boasts of 270 women as welders, others as electricians' helpers and so on. Some of the women work as efficiently at their jobs as men, and earn as much as $1.20 an hour. Several shipbuilding experts agree as to various other processes, not requiring a maximum of strength, on which women can be used, such as flame-cutting occupations, machine-tool operating, ship-fitting pattern making, painting and assembly of final parts. A year ago the personnel manager with one ship-building firm expressed the belief that 15 percent of the work on new ship construction could be done by women -- even a substantial part of the work in the hull division.

As you know the training of women for this field is now under way here -- and will doubtless increase. You know of the courses, financed by Federal and local funds, but conducted by the Marin-Ship Company, where in July a tenth of the trainees were reported to be women. A woman trained to be a welder's helper in 4 weeks or a journeyman burner after 80 hours of instruction can now hope to secure a shipyard job. Also some women after taking the engineering drawing course at the University of California have been placed at such technical work in shipbuilding.

Another critical labor need here ties in with the pertinent saying that an Army marches on its stomach. You are making a tremendous contribution with your large ranches and canneries. But they need more workers and must look more and more to women. Already in the canneries women constitute a large part of the labor force, and are even taking men's places at the double-seaming machines that put lids on cans, working the labeling machines, and serving as checkers and janitors.

You know that women constitute a substantial proportion of the force in various local industries, but have made barely an entering wedge in others - for example the iron and steel and non-ferrous metal plants. More women can and will be used in place of men on many operations in such workshops.

With these prospects it is necessary for local trade unions to cooperate with Government and management on all community and plant committees dealing with labor supply, recruitment, and training of women and their adjustment to jobs and industrial conditions.

We all agree that the right kind of training directed to the needs of the local ity is the essential foundation -- whether the instruction is given in preemployment courses or within the plant. Men in trade unions covering occupations formerly considered as masculine specialties, for which women are now needed, are in a key position to forsee labor shortages and to help build up sound training courses to enable women to qualify for such work. Foremen and job instructors can make or mar women as new workers in a plant. An understanding of women's needs and abilities -- use of proper techniques in fitting them into new jobs -- and careful selection of women for upgrading will not only make easier the assimilation of women in industry but will aid the whole war production program.

In fact to achieve such objectives for women there is needed a good personnel division with a well-qualified director and well-trained interviewers. Where competent women handle questions pertaining to women workers, this helps to prevent mistakes and to iron out troubles.

The effects of poor employment policies for women in one plant do not stop there but tend to retard their usefulness elsewhere in the community. But discrimination against women for suitable employment in plants or for union membership just because of their sex should be, and is being, eliminated. Discrimination against women applicants because of rigid specifications as to age, race, size, weight, or appearance should also be eliminated. Such practices automatically close the door on many good workers. Each woman should be judged on her own merit. In general, despite the rapid employment of large numbers of women, employers have declared themselves not only satisfied but amazed at women's abilities and quick adjustments.

Some firms that have taken on significant numbers of women report increased production and lowered costs, particularly when men and women are employed at the same wage, in the same department, and at the same job. Not long ago a supervisor in an aircraft factory testified that a woman welder "took to it like a duck to water -- in two days she was equalling any man in the shop and before long surpassing them." In another plant one woman was pointed out to a Women's Bureau agent as a recent substitute for a man as an operator on a sensitive drill. She had exceeded his production the first day, though he had been on the job for months, and at the time she was maintaining a daily output doubling his record.

At some jobs women surpass men, at others men are definitely better, while on a number of occupations men and women are equally satisfactory.

Some California plants in a recent Bureau of Employment Security survey reported that with the same training and experience as men, even on difficult machine operations, women could be moved within a department or transferred to other jobs as readily as men.

Coming now to what I call the keystone in the whole arch of woman employment in war or peace times, I want to stress the essential principle of the same wage rates for women as men.

From the very beginning of the Women's Bureau in World War I we have advocated that wages be based on occupation and not on sex or race. At no time should we tolerate in this country a double wage standard -- one set of rates for men and a lower set for women -- and certainly not in the present critical period nor in the difficult days following the war. Such pay differentials undermine the whole economic fabric of a Nation. In our fight for democracy we can not permit such an undemocratic unsound procedure as underpayment of women who take the place on production lines of men recruited for more skilled war jobs or for military duty.

Recent investigations of the Women's Bureau reveal varying wage trends. In one plant typical of those still adhering to the double wage policy we found women were being paid 47 cents an hour for the same job on which men's pay was 67.4 cents. The workers in such a plant declared that "women in the labor force can not be expected to exhibit the necessary morale when discriminated against by wage-cutting. It is also important to the morale of men on the jobs as well as those leaving for the front to be confident that existing wage structures will not be undermined in their absence."

On the other hand, we find considerable progress in regard to the same pay standard. The aircraft industry particularly deserves honorable mention in this respect. The majority of aircraft plants have set 60 cents as the minimum entrance rate for men and women, with the same regular increases for the first three months, and with later promotions on the basis of individual ability. Some firms pay a higher minimum. For example, in a middlewestern plant the union has succeeded in writing into its agreement the same wages for women as men on the same occupations, with hourly rates beginning at 95 cents.

A month ago in the General Motors case before the National War Labor Board the panel to whom the case was referred recommended that "women who perform work which is the same in all material respects as that performed by men shall receive the same wages as men." The War Labor Board on September 17 unanimously directed that this policy be followed and that the parties in the case - the United Automobile, Aircraft, and Agricultural Implement Workers of America and the United Electrical, Radio and Machine Workers of America on the one hand, and the General Motors Corporation on the other - negotiate a contract provision to put this principle into effect. This achievement will be pointed to as a precedent everywhere in the United States. Also other labor unions have recently gone on record for this principle of the same pay rates for women as men as has the President of the National Association of Manufacturers. Last January the United States Labor, War, and Navy departments recommended the same pay rates for women as men in war industries. However, much missionary work remains to be done to get this principle firmly woven into the Nation's economic fabric. I believe the individual labor unions are a very potent force to help effect this.

Sound labor standards not only conserve morale and man power, but speed up production. Today we do not have to speculate about the effects of unwholesome working conditions. We have scientific evidence of their consequences. We know that unduly long hours increase fatigue that undermines health and destroys productive ability. This is true for both men and women. But as women's resistance is found to be on the average about two-thirds that of men's, extra vigilance against long hours for women is necessary.

Studies on hours as related to production both in war and peacetime enterprises prove that the desirable maximum from the viewpoint of workers and output is the 8-hour day and 48-hour week. Recently 8 Federal Government agencies recommended this schedule to all war contractors for both men and women.

These agencies further declared that for the individual worker one day of rest in approximately seven days should be a universal and invariable rule. A 30-minute meal period was also recommended -- a standard the Women's Bureau advocates as essential for women. We further recommend a brief rest period of about 10 minutes as a desirable break in each half of a work shift, conducive to greater productivity among women workers.

Of course we realize that in this great emergency, war contractors might sometimes need to employ women longer than 48 hours a week or on night shifts, even in States with laws generally prohibiting such practices. Therefore, some months ago the Women's Bureau recommended that certain emergency procedures be followed by State Departments of Labor to safeguard the legal standards, by permitting relaxation in individual plants for a limited period for women on war work, if investigation proved this necessary.

As to labor's need for zeal and vigilance in promoting a safety and health program I scarcely need remind you. On workers' keen eyes, skilled hands, brawn, stamina -- on their steady performance without loss of time -- depends our country's ability to win the battle of production. Industrial hazards loom large at this time when production must be expanded and speeded up, and when so many new workers -- including much larger proportions of women -- are being drawn into industry for the first time. They are being used on new kinds of machinery, on new processes, and required to use new materials and substances, the effects of which on workers have not been tested.

Statistics on industrial accidents tell an appalling story and call for much greater precaution. Last year industrial accidents caused the death of 19,200 workers, and injuries to over 2 million persons. Of these 100,000 incurred permanent disabilities. Recently Paul V. McNutt pointed out that 80 million working days can be saved this year if war workers keep fit. That means 14,000 more bombers, 10 dreadnaughts, 33,000 tanks to help win the war.

To help prevent industrial injuries and to promote the health and efficiency of women workers we have prepared in our Bureau a series of special bulletins for distribution to war plants. Here are some of the subjects we have discussed:-- The working conditions most conducive to women's efficiency, such as adequate seating, lighting, service rooms and so on -- the types of clothing women should wear for safety on the job, since they must make more radical changes than men in their dress habits, wearing a garb more similar to men's with a cap to protect the hair -- eliminating jewelry, high heels, loose sleeves, full skirts. Other reports discuss what weights women can lift without injury -- how they can be safeguarded against industrial diseases, particularly the ones to which women are more susceptible -- how often women should be changed from one shift to another.

Not only must such questions of working environment but also problems pertaining to living conditions be the definite concern of organized labor. Nowadays these matters call for special attention because of the greatly increased migration of labor. For example, many young women leaving home environments for the first time to shift for themselves in congested communities need assistance to guarantee them adequate living quarters, proper eating facilities, wholesome recreation, satisfactory transportation to and from work, essential medical care. Such facilities help to maintain morale and prevent absenteeism and labor turnover.

Another matter of vital interest to us all is women's part in trade union activities. The number and participation of women in unions has been growing steadily in recent years. To date not far from 3½ million women are found in the ranks of organized labor. To increasing extent women are serving as union officials, participating in organizing campaigns, and engaging in collective bargaining -- and in some cases before the National War Labor Board.

Trade unions formerly made up of men only -- are opening the doors of membership to women for the first time or seeing the need to do so. A conference like this gives a tremendous boost to this whole program. It increases the interest of trade unions in women and the interest of women in trade unions -- highly desirable objectives at any time.

The unified and high-minded action of all forces is imperative in this war situation with its overwhelming complexities. To achieve victory we must make the best uses of all our resources -- both human and material. You and I agree that selfishness and prejudice can have no place in this program. As patriotic Americans, whether trade unionists, industrialists, or Government officials, we refuse to tolerate unscrupulous and unfair practices at any time, and particularly in this dire emergency. Hoarding, profiteering, black markets, wildcat strikes, and unjust discrimination against workers are internal foes that must not be allowed to spring up to divert us from our main task of fighting external foes. We must all devote ourselves tirelessly and selflessly to the challenging task of defeating the agression and oppression now rampant in the world.

But we must do even more. Even as we formulate and execute our war plans, we must spare some of our efforts for the ultimate goal at which we aim. We must even now look beyond the winning of the conflict to the winning of the peace at the close of the war. Hardly less challenging than our present struggle will be the need to reconstruct a world torn to pieces by wide-spread strife and destruction.

Already there is considerable inquiry as to what will happen in the post-war period to the current developments required to meet the demands of war. For example, how can we convert our industries once more to a peacetime basis? How can we adjust our labor force from the making of instruments of destruction to the production of all the necessary goods to guarantee satisfactory living for all our people and those in other countries as well?

One question frequently asked me is: At the close of the war what is to become of all the many women who have joined the labor force? The solution of this question as of the others lies within the compass of the Atlantic Charter. The solution lies within President Roosevelt's creed of the Four Freedoms. Freedom from fear, freedom from want -- therein lies the solution in the post-war period of the adjustment of women as well as men. It was only a few short years ago we were facing the fact that a third of our people were ill-fed, ill-clad, ill-housed. Now we are fighting to preserve our democracy, not just as it was, but we hope to revamp and revitalize it so as to guarantee to all our citizens -- freedom from want -- to guarantee to women as well as to men -- an opportunity to earn a livelihood under fair conditions.

At all times in this country millions of women must earn their own living -- many must support dependents as well. As a result of the war -- women's wage-earning responsibilities will be greatly increased. At the close of the conflict women will have to continue to take the place of men who fail to return or who come back maimed. Then -- we must see to it that such women who have stepped so willingly and heroically into war work today -- women who have left their homes or abandoned their peacetime pursuits -- are given their due chance at freedom from want. Then -- as the soldiers are mustered out of their military duties -- back to their civilian jobs --

women must not be unfairly accused of taking men's jobs -- as at the close of the last war. Then -- Government, labor, and industry in making plans for our labor force must not overlook the needs of women -- who as unknown soldiers and unidentified heroes on production lines -- have made their sacrifices, too, for victory and democracy.

(WO 42-140)

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

SAFETY AND HEALTH PROBLEMS OF WOMEN IN INDUSTRY

An address delivered by
Mary Anderson, Director, Women's Bureau, U. S. Department of Labor

At the

31st National Safety Congress of the National Safety Council

Congress Hotel, Chicago, Illinois

October 27, 1942

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

SAFETY AND HEALTH PROBLEMS OF WOMEN IN INDUSTRY

I am very glad to be with you today to discuss some of the health and safety problems of the estimated 3 million women now on war jobs in this country. It is not my purpose to be technical, for you are the technical experts. My own experience in the factory as a production worker and in the Federal Government as Director of the Women's Bureau has given me special understanding of the place of women in our industrial life. You and I with different experience but the same purpose face the enormous losses in work power due to accidents and illnesses. We want maximum production for the war effort with minimum waste of human life and energy.

More women are working today than ever before in our history, over 14 million of them. About a fifth are on actual war jobs but their numbers are expected to double by the end of this year. From a half million in December of last year to 4 million in December of this year means an increase - in one year - of 3½ million women workers directly engaged in the war effort. Some of these women are experienced workers using their same peacetime skills in war production. Others have transferred their experience to new types of jobs. But now, more and more, we must call into war plants women without previous industrial experience.

The outcome of our production battle depends on how effectively we use our womanpower. How effectively we use it, not only within the next few months, but possibly for years to come. We dare not be shortsighted or slow in attacking - vigorously - any conditions which destroy or weaken our productive capacity.

In the limited time we have here today I want to call your attention to several factors affecting the safety and health - and consequently the maximum work results - of women workers. They are old problems with new importance. They involve production methods, work clothes, plant facilities, and conditions beyond the plant gate. Some of them need scientific research and direction; some need application of our native ingenuity; others need understanding of human nature and cooperative action.

Women have been highly satisfactory on routine, monotonous, repetitive, painstaking, intricate jobs. Most mass production jobs fit exactly into that description - routine, monotonous, repetitive, painstaking, intricate. They demand a great deal of energy but not much muscular strength. Because women do not complain of being tired as quickly as men do on such work, does not mean that women are inhuman and can go on hour after hour without rest or variation and still maintain perfect accuracy and high speed. Women's special aptitude for these necessary mass production jobs must be safeguarded, not disregarded. Five or ten minutes away from the machine or the bench is not time lost. It is more likely production units gained. A thousand time fuzes are just so much scrap metal unless they are absolutely accurate according to detailed specifications. There is no margin for error. Regular, brief rest periods are sound and simple safeguards against the fatigue which undermines efficiency and sets the stage for accidents. If the flow of production is interrupted by the absence of a worker, it may be possible on some jobs to devise a system of relief workers. The Women's Bureau advocates 5 to 10 minute rest periods in the middle of each 4-hour work spell. This practice can increase output as much as 5 to 10 percent. The more tiring and monotonous the work, the greater the increase resulting from rest. But rest needs vary with conditions. Try-outs must determine the best rest pause. Ten minutes in the middle of each 4-hour spell usually is adequate if facilities for rest and refreshment are convenient. Heavier or more trying tasks may require longer or more frequent pauses. Chance should be given for change of posture at work - sitting if the job requires standing, movement if it requires sitting.

Many machine operations could be performed sitting down instead of standing. There is no reason why a drill press operator or a spot welder, for example, should not sit at her machine. Many of them do, but many stand too, because chairs of the proper height have not been provided. But sitting can be very tiresome if the chairs are not suited to the requirements of the job. Eight hours of sitting on a stool or ordinary chair will cause severe back strain. We have known for a long time the positive value of using chairs which have posture back rests and can be adjusted for height. There are still too many plants using stools or other poor substitutes for adequate chairs.

Women are not generally as tall as men and it may be necessary to take this into account when women are placed on certain machine operations. When new machinery is installed this factor certainly should not be overlooked in the planning. Where women replace men on heavy duty machines it may be necessary to provide wooden platforms for women to stand on, or to make other adjustments so that they can handle the machines efficiently and safely. An inch difference in height may mean that the operator's head is an inch closer to moving parts or an inch farther away from the controls. A few specific examples will indicate what can be done - besides providing platforms or adjustable seats - to make so-called "men's jobs" safe and practical for women.

In an aircraft plant steel jigs too heavy for women to lift were replaced with masonite jigs weighing less than one-tenth as much.

Suspending an air operated wrench from a counter-balanced support eliminated the necessity for lifting and handling it. A woman replacing a man in the use of the wrench was able to operate two such counter-balanced air driven wrenches simultaneously instead of the one formerly operated by the male employee.

Engineers of a machine tool company put a new lever on a special spinning lathe so it could operate with 70 percent less exertion than before. An operation thought to be exclusively male can now be done by a woman.

The same machine tool company attached multiple spindles to milling machines making it possible for a girl to operate four machines with fewer steps from one to another.

Such retailoring of jobs is important to increase the effective use of women and to maintain their health.

I mentioned earlier that we must now expect to call into our war plants greater numbers of women without previous industrial experience. Some are just out of school and lack any kind of work experience. A "green" worker, man or woman, is a liability until safe and efficient work habits become second nature. The pressure of high speed war production does not relieve management of the responsibility of giving time and attention to teaching new workers how to conserve their energies for production, how to reduce accident and health hazards, and how to use safety devices. It is important not only to demonstrate how but why. It may seem a waste of time to busy people to explain "why", but that is small compared to the millions of man hours a year lost because of accidents and illness that could have been prevented.

The things I have spoken of so far are problems needing the attention of production and safety engineers. The hectic days of plant expansion and stepped-up production should not blind us to the fact that we must not only reach our highest production goals; we must maintain them, month after month, year after year if necessary. All of these adjustments in production methods are necessary if our workers are to withstand the strain of months - or years - of a high speed production pace.

Closely related to machinery and the jobs on which women are working is the question of women's work clothes. Here, I feel, the experience and point of view by the Women's Bureau have special value to management and workers. Women's ordinary street clothes are not practical in the plant. We all agree on certain basic requirements for factory work clothes for either men or women: Not too tight to hinder free movement, not too loose to get caught in machinery; pockets only when they are not a hazard and then limited to certain types; no jewelry, including rings and watches; hair completely protected; and well-fitted shoes completely covering the foot, with extra toe or other protection where necessary. On some jobs trousers are most practical. On many other jobs women can wear a simple type of dress. The Women's Bureau has never encouraged a rule of thumb requirement for work clothes. We do say that the work clothes should be adapted to the particular job, with all the necessary safety precautions taken into consideration.

It seems to me that we have overlooked to a large extent the importance of the way we choose the kind of work clothes, especially uniforms, which women should wear on the job. For that reason I want to give you a rather detailed case history of the experience of one large war manufacturer employing great numbers of women. Perhaps this firm's experience cannot be duplicated exactly in other plants, perhaps it should not be duplicated exactly for it, too, could be improved. But as we review this experience, certain common problems will doubtless stand out more clearly.

For all of us, one of the major safety problems with women workers is their hair and how to keep it out of moving machinery. The first item in the report from this plant discusses the matter of safety hats: --

"For many years we have experimented with one kind of cap or hat or another. We have assumed that the protection we were looking for was simply confining loose hair. If this were the only problem, any kind of light weight net, or thin material (where there is a question of dust or dirt) would serve the purpose; we have come to feel that with so much revolving machinery (such as spindles) there are two hazards, instead of one. The second one is the question of a revolving piece of machinery catching in the cap and from there into the hair. You will readily see that neither net nor soft close fitting cap would take care of this second hazard.

"After passing on a few suggestions from our safety department to our two units which use a considerable number of women, and have the problem of revolving machines, we put it up to them to make their own suggestions after the problem was outlined to them. We have women in supervisory capacities in both of these plants and they worked with the girls who would have to use the hats. About two dozen hats are in use now at each of the plants, on an experimental basis. We are getting, in nearly all cases, favorable comment.

"These hats are white, but the local manufacturer says that where he is able to buy the material in bolts of 500 yards he can have the hats come through in any color to match the uniforms.

"I talked this last week with several girls who have been wearing these hats for a couple of weeks. One of them said to me that she had probably had a dozen different kinds of caps since she had been working at the plant, but she finds this the most comfortable. She also said that she never realized how close she was working to her machine. Since she has been wearing this hat, she gets a warning of the cap touching the machinery, which makes her pull away. We are trying to get different headsize adjustments so it will not be necessary for a girl to wear a net of any kind if the hat covers up all of her hair. In cases where girls have a great deal of hair, and they are working on revolving machinery, we are insisting on a net to cover any loose hair which may not go under the hat. The top of this hat does not touch the girl's hair, and the material is so stiff there is little or no danger of it being caught in the revolving machinery and then catching the hair. The headsizes are not so tightly fitted, so that if a girl did strike a piece of machinery the hat would be thrown off and that would give her an opportunity to get out of the range of the machine. The only thing about these hats is that this material does not launder. The material is put together in two thicknesses with a sort of mucilage. We are considering using a fine lacquer spray over the surface (we will use no white caps, only blues and greens), which will match our two kinds of uniforms. By doing this, the girls can wipe the dust off the cap, get an inside band, and wear the caps for a month or so.

"The manufacturer has not given us the final price on these hats as it has been entirely on an experimental basis, but he thinks by buying in large quantities he can sell them to us for about 25 cents."

You will notice that a sudden order did not come from the front office that all women were to wear these safety hats. There was an experimental period with opportunity for the girls to suggest improvements and the safety department to observe their usefulness. I want to call your attention again to the comment on hair nets and soft caps - around revolving machinery, simply confining loose hair is not enough. Of course, on most inspection jobs this hazard is not present.

And now about uniforms. The report says . . .

"A sample uniform is used in two of our plants where we have the largest number of women and where there is a good deal of revolving machinery. We have not insisted on this uniform in the twine mills which are old line spinning jobs and have very little machinery which is hazardous. If I remember rightly, during the other war we all used a khaki one piece garment which came to the knees like the old fashioned bloomers. We consider this new uniform a great improvement, both in looks and safety. The girls like the new colors (blue and green) much better and the plant looks very much brighter. When we were using the khaki we could find no material which would hold the dye. This particular material will wash and hold its color and give service for a year or more. We (the Company) buy these uniforms and at no profit sell them to the girls at $1.70 a suit. The blouse can be replaced for 70 cents and the slacks for $1.00.

"In the twine mills we are still using green and white check material made very much like a regular house dress. We would like to standardize this uniform, but as long as the twine mills are not particularly dangerous, and we have a much older and more conservative group of employees, we have not felt we were justified to force the use of these uniforms in the twine mills."

In this account you see that slacks were not required in a division of the plant where women work on operations which do not make such special clothes necessary. Also, you will note that older women work in this division.

Making the uniform available in a choice of durable but bright colors was a wise step. The caps, you recall, are also colored.

Toeless shoes do not belong in the factory. With so many styles of sport shoes, similar to beach sandals, being made, the old difficulty of proper work shoes has a new complication. The report continues with the matter of shoes: . . .

"We have tried over the years to keep safety shoes on hand and get our women employees to purchase them at cost. However, it has never worked out very satisfactorily. We now have just certain general rules that the heel must be sensible (almost a daily inspection is made by our women in charge of the different units), there can be no cut out toes and no bedroom slippers. We find we get, on the whole, a better standard shoe and better cooperation by having careful inspection and certain general rules than trying to keep a standard shoe."

The new, lighter weight safety shoes with the reinforced toe - plate of plastic instead of steel - are an improvement for women workers. It should be an easier matter to have these adopted where they are essential than was the case with the heavier, more awkward and very expensive safety shoes.

I have given this detailed report from one firm because at times we need concrete examples instead of generalities. Safe work clothes for women should be developed in cooperation with the women who must wear them day after day. Education is as important as correctness if we want the best results. Of course, intelligent supervision - which is not the same as policing - is a part of this education. The women want to do their work well, they also want to look as well as possible on the job. It should not be impossible to combine both aims for safety and morale.

Besides the clothes women wear on the job, we must give attention to providing adequate dressing rooms and locker space. These and other plant facilities such as rest rooms, toilet and washrooms, and food service arrangements have a direct relation to the health and efficiency of the workers. The Women's Bureau has prepared special material with practical recommendations for installing and maintaining washroom and toilet facilities for women in industry and we will be glad to consult with those responsible for working out their problems in individual plants.

The question of food service and the kind of food workers eat is very important to the war production effort. Nutrition is our most valuable key to good, all-round health. We are told that at least 80 million working days can be saved this year if war workers keep fit. Here, again, it seems we need both equipment and education. In a recent preliminary survey by the Division of Industrial Hygiene of New York State of 570 war plants, 412 were found to be without any eating facilities whatever. More than 160,000 workers were employed in these 412 plants. The New York State report summarizes the difficulties in a brief seven point statement beginning with this telling comment: "The fact, however, that a cafeteria exists in a plant - even a good one - does not apparently ensure an adequate lunch. There are many reasons for this, a few of which are the following:

1. It is often impossible to provide an adequate lunch for the 30 cents workers are willing to spend. They will not spend more.

2. Plants do not always provide enough time for a good lunch even where they have a cafeteria.

3. Where workers are permitted a choice, they buy more soft drinks than nutritious food. They need education in selection of foods.

4. Some plants are so large, most workers cannot get to the cafeteria in time allotted, so food is delivered to their work benches.

5. The delivery of proper diet to work benches would require rolling steam tables through the plant. Such steam tables are now being designed; are not yet in operation.

6. The layout of many plants prevents rolling any food table from place to place.

7. Food tables now circulating through plants have, in general, sandwiches, milk, coffee, dessert, soft drinks. Workers choose the sandwiches and soft drinks; very little milk.

Because the food problems of industrial workers in our war plants are complicated does not mean that nothing can be done to change the situation. I feel confident that better food service arrangements can be made in most plants and, with popular nutrition education among workers, even food habits can be improved.

Beyond the plant gate, unsatisfactory living conditions take a heavy toll in the health and industrial efficiency of women workers. Some women carry heavy home responsibilities in addition to full-time jobs. You recognize, too, that women workers have certain housing and recreation needs somewhat different from those of men. In some of our war industry areas, many workers are young women away from their homes and families,. living in crowded rooms with several others, without adequate opportunities for good meals at reasonable cost, without opportunities for wholesome recreation. Such conditions make it more likely that tuberculosis, to mention only one disease, will increase - as health authorities predict it will. Tuberculosis deserves special attention because large numbers of women workers are within that dangerous age range most affected by this dangerous enemy. Management, workers, local communities, State and Federal agencies must combine forces in attacking the conditions outside the factory which lead to illness, absenteeism, and less production.

I have omitted many things about the safety and health of women in war industries which we should consider. Some of these matters will be discussed in technical detail by other conference speakers. Women are on the job in the war industries; they are turning out the quality and quantity of work the war demands. The nation will need their particular strength and ability even more as time goes on. It is only sound sense to do everything possible, within the plant and beyond it, to safeguard their health and efficiency for victory.

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For Immediate Release
Friday, March 27, 1942.

WAR PRODUCTION BOARD
LABOR DIVISION

W - 41

Speech by Miss Thelma McKelvay, Chief,
Women's Labor Supply Service, Labor Division, War Production Board, at 21st Annual
Massachusetts Defense Safety Conference,
Boston, Massachusetts, March 27, 1942, at
10 A.M. E.W.T.

MILLIONS OF WOMEN WANTED FOR WAR PRODUCTION

Every time an able-bodied American is inducted into the Army or the Navy, the potential labor force of the United States is diminished by one. Every time a new soldier or sailor puts on his uniform and gets his preliminary instructions, the number of guns our armed forces need is increased by one. Every time the Japs or the Germans shoot down an Allied plane or torpedo an Allied freighter, American industry chalks up a pledge to replace it with two planes or two freighters. In fact, every step in our military strategy has a corresponding step in industrial strategy.

Today we have fighting men in Australia, in Ireland, in the Philippines and the Pacific Islands, in the West Indies, in Panama, in Iceland. They cannot carry out their great responsibilities unless we have men and women in ever greater numbers producing weapons in Boston, in Chicago, in San Francisco, and in hundreds of other industrial cities in the United States.

About 55 million people are gainfully employed in this country today. Between 6 and 7 million of them are directly engaged in war production, but to turn out the guns and tanks and planes and ships that our armed forces must have in 1942, we will need more than 15 million war industry workers by the end of this year. Production quotas for the following year call for the employment of nearly 23 million war workers by the end of 1943.

The manpower demands of war production have already taken up most of the unemployment slack in our existing labor force; and while many of these new war workers will transfer from jobs in civilian industry, we will have to draw upon new reservoirs of labor in order to keep our machines going around-the-clock, seven days a week.

There is no more important reserve of labor than women, and the next two years will bring not two million, but more probably 3 or 4 million women -- perhaps more -- into war industries.

There are 13 million women in the labor market today. Some three million of these are already employed in manufacturing of some kind. Tens of thousands of the remaining 10 million can be trained quickly for war production jobs. Other thousands will transfer from civilian production to war production. Many women not now employed have been factory workers in the past.

and would need only brief "refresher courses" to re-equip themselves for war jobs.

While the employment of women in war industries in increasing numbers is inevitable, I urge employers not to look upon women workers as a problem, or as a substitute. Rather, management should think of the employment of women as a major solution to their personnel problems. In many industrial centers, labor shortages are either present or looming just around the corner. While women will not add to the supply of skilled labor immediately, they are a large and promising source of industrial manpower through training in the vocational schools or in the plant on the job.

The importance of training -- and the importance of training now -- cannot be overemphasized. As a nation facing the realities of the near future, we cannot wait to begin training new women workers on the same day that we find that they are needed to produce war material. The Defense Training Program carried on in the public vocational schools has trained millions of men for war jobs in "refresher" courses, preemployment, and supplementary courses. But in the year and a half since the Defense Training Program was initiated, fewer than thirty thousand women have been trained in such courses. It is immediately necessary to admit women to defense training classes in preparation for their induction into war industries.

The Labor Division of the War Production Board does not advocate separate training for women. The Labor Division urges the opening up of training opportunities in existing classes to thousands of additional women. To do the same jobs that men do, women should have exactly the same training that men have, and there is no need for duplication of effort in separate classes. What we do need is a coordinated effort among all the government and private agencies concerned, as well as management and labor. The full use of labor supply -- and most important, local labor supply -- is not the responsibility of one agency, or of industry alone -- but rather a shared responsibility.

There is no question but that a productive war labor force of 23 million persons by the end of 1943 means greatly extended training activities immediately. The best place to train a new worker is in the plant, right on the job, where he can learn by doing, produce while learning. Instead of lengthening the weekly hours of our present war workers, which some people are mistakenly advocating, the base of war employment should be broadened to include all reserves of local labor supply -- women, older workers, handicapped, Negroes, and any other groups who have not yet been given an opportunity to participate in the war program and who have the ability to produce.

The Training-Within-Industry Branch of the Labor Division has a staff of consultants all over the country, to help manufacturers analyze their training needs and work out in-plant programs of upgrading and training. A recent bulletin issued by the Training-Within-Industry Branch points out that there is nothing very new or startling about the employment of women in industry; that women constitute a fourth of the workers in manufacturing establishments; that they are indispensable in the fields of service, teaching, and clerical work; and that they have entered managerial and professional fields in great numbers. New England is thoroughly familiar with women workers in her textile mills and shoe factories.

But the idea of employing women is still foreign, and perhaps a little appalling to many men in the war industries -- aviation, ordnance, shipbuilding and others. It is in these industries that more and more women workers will be needed as our war production spurts ahead and as men are drawn in increasing numbers into the fighting forces.

Actually, the only restricting factor in the employment of women is the physical requirements of certain jobs, those which require strength to perform. Industrial experience has demonstrated without dispute that women bring to their jobs an accuracy and deftness that are invaluable in manufacturing operations. In many kinds of precision work, they are superior to men. It is generally admitted that women make better inspectors than men.

What is more, employing a woman for any job that she can do, or can learn to do, may release a man for more skilled work, or work not suitable for women, or for service in the armed forces.

Let me tell you just a few of the jobs that women have done and can do satisfactorily.

In electrical plants, women can work as radio assemblers or armature winders. Some work at engine lathes and milling machines, others as spot welders or airplane coverers. In a plant that makes bandage shears for government use, women do all the assembling, shaping, sharpening, testing, and chrome plating. In rubber factories, women work on bullet-proof gas tanks. Needles and thread have been women's tools for centuries, but cutting and stitching silk parachutes is a new departure.

The number of women who are working in aircraft factories today is a small fraction of all aircraft workers. They are engaged chiefly in sewing covers for rudders, ailerons, wing tabs, and other control surfaces of the empennage. A few make parts and do minor jobs on electrical assemblies, or wrap and identify gas lines. They are riveting and welding. But this is only a beginning. We estimate that at least one-third of all jobs in aircraft plants could be filled satisfactorily by women.

Women have special value in the manufacture of small arms ammunition. "Small arms" include hand and shoulder weapons, machine guns, and automatic weapons of all sizes up to .50 caliber. Ammunition for all of these is of major importance in the air. In firing action, an airplane equipped with eight machine guns pours out 1200 rounds of bullets a minute. Tens of thousands of planes carrying machine guns call for millions, not thousands, of bullets. Small arms ammunition plants are already employing large numbers of women, and have found that women are particularly well fitted to give this work the careful attention it must have.

The same story could be repeated for almost every major war industry, in terms of the different operations that go into the making of a tank or an anti-aircraft gun. The story must be repeated in every major war industry -- must be repeated on a large scale -- in order to achieve the production goals we have undertaken to reach.

The use of the local labor supply wherever possible is a policy which has been stressed consistently by the Labor Division throughout the war effort. Employers frequently go outside their own communities to recruit semi-skilled and skilled workers who can produce immediately without training. Today, when all our industries are in desperate need of skilled workers, we must not waste the energies of our working men and women in needless moving around, with its accompanying problems in housing and transportation in industrial centers. Rather, we must set about in an orderly fashion to develop and use to its fullest capacity every ounce of manpower in every working community.

We will get more production in the long run by using the local labor supply and solving the problems as we come to them, than by trying to achieve shortcuts through securing workers from outside areas. Management and labor should start now to think of the difficulties that will have to be met in the process of drawing women into war industry. For example, there will be women with small children who could take war jobs if some provision were made for the care of their children. Women's organizations, churches, settlement houses and the schools should combine their efforts to establish the necessary day-nursery facilities that will enable those women to work. To stimulate planning and preparation of this kind is a positive contribution to the war effort.

It is not only women who are discriminated against when employers fail to utilize the local labor supply. Both management and labor have been guilty of discriminating against Negro workers or against national groups who are nevertheless loyal American citizens. Such discrimination is short-sighted and undemocratic at any time. We certainly cannot afford it at a time when we need all the energies of all our people for the protection of our way of life. We must fight the Axis with the courage of our democratic convictions.

The Labor Division has a special section devoted to the problem of integrating Negroes and other minority groups into war industry. We have made considerable progress in breaking down these artificial barriers, but not nearly enough. Aside from democratic considerations, we must do away with these prejudices for the practical reason that we need every worker we can enlist in war production. This war cannot be won by using only white male labor.

We must do more than merely recruit and train women workers. As we move hundreds of thousands into war jobs, we must give special consideration to maintaining proper labor standards. Some employers have felt that women should receive lower wages than men, on general principles. There is no justification for such a policy. When a woman does the same work as a man, she should receive the same pay for her services.

Last summer, Mr. Sidney Hillman, Director of the Labor Division, in a letter to war contractors in congested industrial areas, said, "I urge you as a holder of a defense contract to examine the possibilities of employing women in your plant. It is necessary that the hours of work, rates of pay, and conditions of work conform with the established standards for the industry."

Many states have protective legislation which sets standard working conditions for women, limits their hours -- both the number of hours a day, and the time of the day -- and restricts the occupations they may undertake. Most of the states have already made provision for modifying these standards where necessary for war production needs. The State Departments of Labor are prepared to consider the needs of war plants in relation to the material produced and the labor requirements to meet or speed up production schedules.

Some employers have objected to hiring women on the ground that it means time and money and space taken up in providing extra restroom and sanitation facilities, or that women, being less experienced and not "mechanically inclined," might be a safety hazard.

It is of course necessary to have proper restrooms and medical facilities in the interest both of production and of the worker's welfare, but the expense is far from excessive.

As for the second objection, just reading a list of the jobs that women have done or are doing in industry should be enough to disprove the notion that women are not mechanically inclined.

Women in industry have a better safety record than men, on a percentage basis. At the same time, we must recognize that a drastic extension of the scope of women's work in factories calls for the provision of proper safeguards and protective devices to minimize the possibility of accident. There must be adequate safety instruction. This is equally true when men undertake new processes or handle new tools. From the first moment of instruction, safety should be built into the job -- whether you are working with men or with women.

One of the most serious of all industrial hazards is industrial fatigue. It is impossible to measure the toll of fatigue in lives, in dollars and cents, in time lost to production, but scientific studies have proved that the cost is great. The tired worker is more likely to drop a tool or get caugh in a running machine. Even if he is lucky enough not to have an accident, he certainly is not as productive as the worker who is fresh and alert. If safety practices have been thoroughly taught, so that they are automatic with every worker, the hazards of fatigue are considerable reduced.

Fatigue may come from too long hours, with not enough rest, or it may come from poor eating habits and insufficient nourishing food. The most desirable length of the work week varies in different occupations, but in general ten and twelve-hour shifts should be avoided unless there is not enoug qualified labor to operate the machines. In the long run, shorter shifts and more workers will cost less and produce more.

Nutrition is of the utmost importance to productivity. Nor is nutrition something that should be left entirely to the worker to figure out for himself. Every plant large enough to warrant it should include -- as part of its production engineering -- a pleasant cafeteria or lunch room where employe may purchase inexpensive, nourishing hot lunches.

Most of these considerations -- of nutrition, of safety programs, of fatigue, of labor standards, of training -- apply equally to men and women. There are very few employee problems which concern women exclusively. Women make loyal and energetic workers; they are unquestionably capable of turning out war weapons; and they are eager to do their share in winning this war. The opportunity to work is coming to them because we are faced with a long, hard war. As a nation, we cannot delay in using the productive energies of all our people -- men and women alike.

~~Mrs. [illegible]~~
MVR
For your
files

WOMANPOWER

Address by

Mrs. Ellen S. Woodward, Member, Social Security Board
Delivered before the Chautauqua Woman's Club,
Chautauqua, N. Y.
August 24, 1942

It is hard to realize in this quiet, beautiful Chautauqua setting, where untold thousands have found rest, recreation and inspiration, in more happy days, that our country is at war, that we are fighting for our very existence as a free people. Chautauqua has always been associated with "the good life," and the intellectual, religious and spiritual character of its annual programs has contributed greatly to what we call American civilization - and yet, this is a fitting place in which to consider the problems of war - Chautauqua is one of the shrines of civilization. It is right, therefore, that we should here discuss the tremendous problem of saving that civilization. I should like to discuss particularly the contributions that women of America can and must make in solving that problem.

We have heard much of manpower these last several months - manpower in the armed forces and on the production line, we hear, is the basis of victory. Manpower is a generic term - it includes the physical and mental efforts of both men and women - but another term has also been heard frequently - Womanpower. The very fact that the word has come into wide use is evidence that Womanpower has a special place in the struggle for victory; with special duties and special responsibilities. And, it is my firm belief that women do have their own tasks in this war which no one else can perform, and in addition, they share in many of the tasks of men.

Our Nation is confronted with three major challenges: To win the war, to secure the peace, to build a new world - these are the challenges to America - these are our goals - and, in the accomplishment of each of them, womanpower is needed as it never has been needed before.

It has been said many times that this war is being fought on three fronts - the fighting front - the production front - the home front.

American women are serving on each one. They may not be firing guns in the thick of battle as many British and Russian women are doing - but they are in danger zones as members of the Army and Navy Nurses Corps, as Red Cross workers, and even as Government secretaries in zones of military operation.

Thousands of women in uniform will soon be serving in another way with the Army - the Women's Army Auxiliary Corps (the WAACs as they are called) will soon graduate its first officers from the training school at Fort Des Moines. They will help train other women and soon thousands of Auxiliaries will be ready to serve with our troops anywhere in the world.

Less than a month ago women were sworn in as fully commissioned officers of the United States Navy for the first time in history. 1,000 officers and 10,000 enlisted women are to be enrolled initially in the new Women's Naval Reserve. These women are the much-publicized WAVES, and I should like to emphasize that they are serving not with the Navy - but in the Navy - replacing both enlisted men and officers now on shore duty so that they may serve at sea.

So much for women's actual participation on the fighting front. Turning to the production front, we see women occupying other historical "firsts" - jobs which have until now been labelled "for men only" - and women are doing men's work for a very definite reason. Neither our Army on the fighting front, nor the Army of workers on the production front could be mobilized in the numbers this war requires, if women were barred simply because no women had ever held such jobs before.

About 1/5 of the war production jobs are now held by women. They are not only doing the delicate, precise work for which women are particularly fitted by inclination and tradition - such as making parachutes and uniforms, stitching rubber boats for naval aviators, installing delicate apparatus, and grinding lenses to one one-millionth of an inch in accuracy - women are also doing heavy jobs - operating trip hammers, turret lathes and ten-ton cranes; they are testing jeeps and trucks and even tanks on difficult proving grounds. At arsenals, they are firing Garand rifles - machine guns, and even 75-millimeter guns in final tests of their efficiency - and - I understand that it has been said that the "female shooting eye is deadlier than the male."

One-fifth of the production jobs are now in the hands of women, but as the demand for war labor continues to mount, the proportion of women going into the war plants is steadily rising. In several aircraft factories, very soon, at least 1/2 of the workers will be women. A large number of these women have been drawn from non-essential industries and businesses that have closed "for the duration" - but many will be young women going into their first jobs, and many others will be women who have never worked outside the home before. Most of these women need training and the Government, in cooperation with industry, is providing that training.

The War Manpower Commission was set up to coordinate the work of all Government agencies having to do with the recruiting, training and placement of manpower and womanpower. The United States Employment Service, a Bureau in the Social Security Board, is a key agency under the War Manpower Commission. It must refer workers to jobs and would-be workers to training courses in such large numbers that we shall have 17½ million men and women on the production front by the end of this year, and 20 million in 1943 - and this must be done in the face of severe shortages of skilled labor - shortages made more acute by workers constantly leaving the production lines to become soldiers on the fighting lines.

Obviously then, since millions of new workers must be drawn into the labor army - the war industries will have to depend upon women to fill most of the new jobs.

The women of this country - single women, and married women without young children to care for - constitute our largest and most important reserve labor force. One of the War Manpower Commission's biggest jobs is to draw upon this reserve force in an orderly, planned way, to provide for the training of women with mechanical aptitudes, and to place them in jobs.

We have heard much talk about the need to register women for war jobs - Well, although the future need for more and more women in our war industries is certain to develop, today there are almost one million women who have registered for work with the United States Employment Service and who have not yet been placed. At the present time, there are more women throughout the country asking for jobs than there are jobs to give them - why? Because the need for women workers is local - not nation-wide - and that is one reason why the proposed National registration of women was postponed by the President - and this was a wise decision in view of the British experience. There, women were registered for work long before they could be used, and the long delay was damaging to morale. Our 1500 USES offices are constantly in touch with the war industries and their labor needs and we think the best way to fill their needs for women workers is to call a local registration of women when we know what types of jobs there will be - and to do this far enough in advance for women to take the necessary training courses to equip themselves for the jobs.

In fact, this is the way we are proceeding to recruit large numbers of women - Baltimore is one of those localities where many women workers are needed and are being recruited by the United States Employment Service. So is the nearby city of Rochester, N. Y. - Detroit is another. In Detroit, the United

States Employment Service is conducting a very active campaign for the registration of 650,000 women from which we hope to find workers to fill 220,000 war jobs which will open up during the next few months.

The situation that I have described - shortages in some places - and over supply in others - may change in six or eight months. Local demands for women workers may spread and become regional - then nation-wide. If this should happen, a nation-wide registration of women would be called undoubtedly.

For the present, we should carry out recruitment of women in as orderly a way as possible - where needed - and when needed - But any woman, anywhere, who wishes to register at the United States Employment Service without a special call, certainly has the privilege of doing so.

When we hear the phrase "battle of production," we immediately visualize tall smokestacks, tremendous buildings, and huge crowds of workers pouring through the gates. But there is another "battle of production" - the battle to produce food for ourselves, our armed forces and the people and armies of our Allies. American farmers must grow more food than ever before in history- and with fewer farm workers. Women who live on American farms, are having to do work which American farm women have never had to do before, and doing it most willingly

In addition to our American farm women, other women from cities and small towns have volunteered to help in bringing in the crops, and are registering by the thousands in the local United States Employment Service offices.

These women who are helping farmers reach the production goals set in the Food for Victory program are not only helping to win the war, they are helping also to win the peace. As Secretary of Agriculture Wickard has pointed out, the possession by us of large stocks of food when this war is over, will give the United States a strong position at the Peace Table - a position which will be used, we know, not to enslave the vanquished but to further the cause of permanent peace and freedom for all peoples.

And that suggests the third front upon which women are serving and must serve - the home front - and the two great tasks which will follow the winning of the war - the task of securing the peace - and the task of building a new world of freedom.

When we speak of the home front, we think usually of civilian defense, of civilian protection services - of salvaging precious scrap - of buying war bonds - we think of sustaining the morale of our population by maintaining and extending community services which contribute to the health and welfare of the people. Women are actively engaged in all these activities and more women are needed - the are needed in various posts of civilian defense - they are needed to help provide day care for the children of working mothers, to provide recreation for war workers, sailors and soldiers, to cooperate in nutrition programs and to help in a hundred ways to build up the strength of our Nation. 10,000 Defense Councils are organizing the work of men and women in activities necessary to the conduct of the war.

But there is another kind of job which women can do which needs no organization - a vitally important job. We can all work to stamp out "Hitler's lie-machine" in this country. Wherever we may be, whatever we may be doing, we can all be lie-detectors and lie-swatters - swatting any statement tending to disparage in any way our Government or our Allies - Careless gossips may be just as effective agents of Hitler's lie-machine as paid saboteurs. Let's check every rumor - even if we are sure it is true. Let us ask ourselves - "Will spreading this story give aid and comfort to the enemy?"

You will recall the story about "Typhoid Mary," who didn't know she was carrying the germ of disease wherever she went. By the time the medical authorities caught up with her, she had left a trail of racking fever. The wartime version of "Typhoid Mary" is the person who repeats false rumors, spreads dangerous gossip, falls for easy prejudices, and plays the Axis game without realizing what he is doing.

But there is still another way - a most important way - in which women can serve on the home front most effectively. It is on that sector where preparation must be made now to secure the future peace of all nations, and on which foundations must now be started for the building of a new world.

There are some who say that it is foolish to think of peace terms and the reorganization of the affairs of nations now; that we must bend every effort and devote every thought to winning the war; that when it is won, it will be soon enough to talk of peace and reconstruction. But, the women of this country know better - most of them remember the last war; and they remember that those things were said then, too; and they remember that the peace that followed was not peace but only a breathing spell before the outbreak of another and more horrible war of conquest. The young women of today, the wives and sweethearts of this war's soldiers, know that unless the seeds of reconstruction are sown even as we fight the war, they will some day be mothers of soldiers yet unborn - that unless this generation plans for peace, even as it works for war, today's sacrifices are but the prelude to even greater sacrifices to come.

What, then, can women do on the home front to build for the world of tomorrow? Well, this is a new kind of war - total war. We must fight for a new kind of victory - total victory. But will a military defeat of our enemies be enough to bring a total victory? I do not think so, because it did not in the last war. Total victory means a victory of ideas as well as arms. For total victory, we will need not only the force of arms, but the greater force of an unconquerable spirit, that can out-match and out-march the beliefs and "isms" of our enemies. The foundation of our whole national effort must be the building of a spirit that can give us not only victory on the battlefields, but victory on the assembly lines, victory in our homes, where privation will first be felt, victory over every selfish ambition within our national life, and victory, one day, at the peace table.

Morale is the secret weapon that will win total victory. It is a weapon that must be in the hands of every man, woman, and child. The Rt. Rev. James E. Freeman, Bishop of Washington, said recently, "Now, as never before, the building of morale, of those qualities that make men endure in the face of severe trials, is in the homes and with the women of the Nation. Weakness here means weakness in the field of action and a lowered morale on the home front spells lowered morale and defeat on the battle front." The modern battleline runs through every home, every school, every factory, every farm. Morale is a fear-free, hate-free, greed-free spirit. It is the indomitable will to win through to a new world.

We must know not only what we are fighting against, but what we are fighting for. Our total war aims must be the building of a new world; nothing less than that is enough. And that new world must include every land. No nation must be excluded. For there can be no total victory for America that is not also a victory for all mankind.

As individuals and as a nation, we must dedicate ourselves to building that new world.

We need a great, positive conviction, more powerful than any hatred, that will carry us not only through battles, but through confusion and apathy, through poverty and hardship, through selfishness and sorrow.

Then - this will be more than a war - it will be a crusade, and through dark days, our Nation will be sustained and strengthened by the shining goal of a new world ahead. That is the only invincible spirit.

At Versailles, men sat down to the superhuman task, shackled by the hatreds born and bred over many years. The seeds of Versailles were sown during the years that went before. Even so, the spirit of a just and lasting peace must be prepared before men meet at the next peace table.

Even as we meet force with force, we must be preparing the superforce of a new spirit - a spirit of justice and freedom - that will ensure after victory in battle the greater victory of a new world.

Because nations have neglected that superior spiritual force, civilization is in danger of dying at the hands of material force. Rank materialism, like a black pall, has crept over every land - and in that black-out, nations have lost their way. But there is a superforce, a new illumination, which, if we call upon it, will pierce that darkness and again floodlight the world.

That illumination must inspire all American women. Womanpower must be an expression of spiritual power. We women will meet the challenge of these dark days. We will keep the faith - the faith that will bring victory.

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

WOMEN IN WAR INDUSTRIES

Speech by Elisabeth Christman, of the Women's Bureau, U. S. Department of Labor, before the Annual Interstate Conference of Women Trade Unionists and Auxiliary Members, called by the Women's Trade Union Leagues and Committies of Illinois, and Wisconsin. Chicago, Illinois, October 3, 1942.

You asked me to tell you where women are today in our war production battle. In one way the answer is simple:-- (a) at least 2 million women are on war jobs and there will probably be 4 million by December; (b) around 14 million women are working today -- about 3 million more than at the beginning of the defense program 2-1/2 years ago; (c) as of today, less than one-fifth of the employed women are on war jobs; (d) and, about 800,000 women are still unemployed and seeking work.

In other words, the enormous contribution of womanpower to the production line has yet to be fully realized in terms of jobs as well as talk. It is reasonable to expect within the next few months, changes on the labor front more significant for women workers than anything we have known since World War I. Their outlines have already taken shape.

I think you will see more clearly what women workers are doing -- and the changes that are taking place -- if I bring you a few news "flashes" from many parts of the country rather than a collection of statistics. Some of the accounts of women workers still belong to the oddity class but not all of them.

Since "war employment" officially includes jobs in transportation, communication, public utilities, and Government as well as ammunition, equipment, and supplies for the armed forces, the more than 2 million women on war jobs work in thousands of occupations. A news item with this headline, "THIN, NON-COLLEGE WOMEN TAKING OVER ORDNANCE JOBS IN THE CHICAGO AREA" tells part of the story ---- "Women, preferably thin ones without college education or white-collar experience, soon will hold more than half the jobs in the Chicago ordnance district's shell production plants, the Army ordnance officers forcast today --- Their great dexterity and patience make them superior to men in assembly and inspection work, shell plant managers said. The same traits will win women thousands of additional jobs in production of tanks and other war implements, they added -- Women already outnumber men two to one on day shifts in some shell plants. --- A plant personnel director said thin girls were preferred because they were faster and less troubled by heat. Women with college education or office experience are considered undesirable for assembly work because they were 'afraid to get their hands dirty'". -- In a New England mill, women who have made shoe laces for years are still making shoe laces -- with this difference -- now it's shoe laces for the Army. --- In Southern cotton textile mills women turn out thousands of yards of mosquito netting for soldiers in the tropics -- From Colorado comes the announcement that at least one mine and milling company has hired six women to work in their ore sorting plant. "Their job is to throw out rock from crushed gold and silver ore carried along on a conveyor belt."

You have seen a great deal in the newspapers about the girls who help to build the bombers and planes but you may not have noticed that the first women shipbuilders are now on the job. Within one week from three different states came similar news: -- in Oakland, California, 5 women had begun work as welders' helpers at a shipyard; Tampa, Florida announced to the world that the first woman welder has been employed to work in a local shipyard with 7,000 men and that she was joining the Boiler Makers Union; out in Seattle, Washington four women have replaced men in the machine shop of a shipbuilding company, which, even in the first world war, employed no women. Three weeks later came this: -- More than 300 women work for the Kaiser-operated Oregon Shipbuilding Corporation. The first was hired in May. There are 270 women welders, 51 working in ware houses and 26 electricians' helpers in the yards. --- And now women are coming into men's jobs in transportation and in the machine-tool industry, at the same time increasing their numbers in many industries converted to war production such as plastics, rubber, precision instruments, and others.

Perhaps you wonder what the other approximately 12 million women -- those not in war employment -- are doing. At least one is an ice "man", at least four are driving garbage trucks; five Oklahoma women are radio dispatchers for the highway patrol; a New Orleans newspaper wants women to take over paper routes; some are working in a brewery; a few are taxi drivers, bus drivers and trolley conductors; 4,000 women have replaced men in the lumber mills of Oregon and Washington. Women in all of these jobs are still strange enough to make the news but they indicate what may be ahead in the fields of non-war goods and services. Most of the 12 million women, however, are filling more conventional jobs in restaurants, laundries, beauty shops, stores, offices, and on farms. They are doing an important share of the work that must be done to supply civilian needs and to fill the gaps left by men called into the armed services.

You who live in Illinois and Wisconsin are part of the very nerve center of our war production program. Of the nearly 55-1/2 billion dollars in war supply contracts awarded to the various states, through June 1942, Illinois ranks eighth. War production did not get under way here as soon as you wanted it to or as soon as it did in some other areas. You know the meaning of unemployment due to curtailment and conversion of industries from peace-time to war-time basis. Now you are struggling with the cold facts of labor shortages in some fields, of migration of workers to and from certain sections, and the multitude of community problems arising out of sudden war expansion in small towns and rural areas.

The largest war industry in Illinois -- in terms of millions of dollars in war contracts -- is also the largest woman employing war industry:- the manufacture of ammunition and ammunition parts, including bag loading, shell loading, small arms ammunition, shells, fuzes, cartridges and other ordnance material. On the other hand, the airplane engine industry in Illinois, second only to ordnance materials in dollar value of its contracts, employs very few women. Until now, only 3 percent of the thousands of productive workers in these engine plants are women. Undoubtedly this will change in the next few months. Airplane engines are made of thousands of small parts which must be machined and inspected with infinite precision. Women have already demonstrated that they can do this type of work very well. While the percentage of women on production in aircraft engine plants is generally low back in March 14 per cent of the production workers in a large plant making engine parts were women with the expectation that there would be 40 per cent women by this time.

The second most important woman employing war industry in Illinois has the catch-all title of "communications equipment and other electrical products." Women have been the mainstays of this industry for years, making telephone and radio equipment, and electrical supplies of every description.

In Wisconsin, more dollars are going into shipbuilding, including submarines, than any other war equipment (with the exception of ordnance material.) Very, very few women are employed on ship building -- so far. Future developments may change that somewhat. Wisconsin women are on production jobs in plants turning out Diesel engines, electric equipment, mechanical time fuzes for shells, bomb parts, and other ordnance materials. At least one company with a large branch in Wisconsin has issued a handsome booklet with photographs praising the skill and ability of their women machine operators.

You are filling a lot of war orders in Wisconsin -- below the million dollar class -- for supplies necessary to a modern army: -- for shoes, socks, gloves, raincoats, overshoes, and uniforms. These are made in shops which traditionally employ a large proportion of women. You see what this means: Established shops, with a high percentage of women workers, filling war orders, doing essentially the same operations as they did in civilian goods. This situation has special significance to those of us who are concerned about women workers in the war effort.

Draw an imaginary circle including Janesville and Beloit, Wisconsin, and Rockford, Illinois, then focus your attention on what is happening in the machine tool industry in that area which cuts across state boundaries. Here you have one of the concentrations of the machine tool industry. You know how important the industry with the machines that make machines is today for war production. You realize the nationwide shortage of skilled machinists. Yet the machine tool industry of the Rockford-Janesville area has been losing experienced workers and is unable to attract them from other areas. The wages are among the lowest in the country for workers in the machine tool industry -- according to studies by the U. S. Employment Service -- in Rockford, from a 45¢ low for unskilled workers to a $1.07 top for skilled workers. In another part of the country machine tool shops take on unskilled beginners at 65¢ with definite provisions for increases after 3 months. Reluctantly but inevitably, machine tool shops elsewhere have begun turning to women to help solve their labor shortages. Eighty-two percent of the total employees are women in one machine tool plant in Chicago. Women are used on most of the jobs, and according to the management, they have done so well that the proportion will be increased. However, watch this. In a recent field study of women in the machine tool industry made by the U. S. Women's Bureau we found, almost invariably, that women were being paid lower rates than men.

In the light of all that, consider the seriousness of the wage problem for women hired by the Rockford-Janesville machine shops. An unorganized tool center, with subaverage wage rates for men is likely to send its wage rates still further down the scale as women are introduced.

Even this brief review of some of the aspects of the production front should help us see that women are not only on the job in a great variety of occupations and industries, but they are also making good. Some of the jobs are new departures for women, many others are the same jobs with a war goal.

The next question is: - what about wages? The Bureau of the Census tells us that in 1930, "In all but a few States, the median income of females entirely dependent on wages or salaries was from one-half to two-thirds of the corresponding median for males. In 14 States, the averages for women were less than $500, whereas only two States -- Mississippi and Arkansas -- reported averages for men of less than this amount. The average for women exceeded $800 in only two States -- California and Nevada. In all but 16 States the average for men topped $800." In other words, in almost every State, women earned less than men, sometimes much less.

That was in 1939 at a time when defense and war production had scarcely affected wage figures. But peacetime and wartime wages for women have a common denominator -- women earn less than men. Women compete in a labor market which considers them sub-citizens in the industrial world.

Certainly wages for women are much better than they were in the 1930s; and we are all glad to see the old system of wage differentials under heavy fire from many quarters. The war is bringing the matter of wage rates for women into sharper focus. A growing chorus of strong voices can be heard in many parts of the country saying: -- "Where there is a job to be done and a woman to do it, she should be paid for the job and not paid less because she is a woman." There are good signs on the industrial horizon, and important advances are being made.

But we can not escape some facts about women's wages in wartime which are not pleasant. You remember the news story I referred to earlier, "THIN, NONCOLLEGE WOMEN TAKING OVER ORDNANCE JOBS IN THE CHICAGO AREA"? I stopped quoting before I came to this choice part:- "Ordnance officers said women are more content to work with their hands than men and are less inclined to agitate for better jobs or pay." The same minimum entrance rates for men and women in the ammunition plants are the exception rather than the rule. According to Women's Bureau studies, minimum entrance rates for women in 15 privately operated ammunition plants were from 40¢ to 65¢ for men from 45¢ to 80¢. In only 3 were the rates the same. There was a differential of 5¢ an hour in 3, but some differentials were as high as 18¢, 20¢, and 22¢. These all apply to minimum entrance rates.

Let us look at the differential in larger figures, taking the day rate in some Government operated plants. In one plant, on the jobs rates for minimum pay schedules, men are paid 80¢ to $2.00 more a day than women; on the jobs with the maximum pay schedules men are paid $1.04 to $2.48 a day more than women. In a second plant, the minimum varies from 64¢ to $2.08 a day more for men not including foremen; the maximum from 32¢ to $3.12. These are pay-envelope facts in the largest woman-employing war industry. Fortunately, an occasional plant pays the same rate for women and men and daily, we believe, more officials are understanding the justice and post war importance of fixing wages by the job.

Women turn out the work. The experts say they are better than men on many of the jobs. They -- the women -- get paid less. Wage rates are based on the sex of the worker, not on the job.

Remember, too, I have already reminded you that great numbers of women are on jobs long considered "women's work". The established rates in these industries are not very high in most cases. Where women are replacing men in non-war occupations we may find more of this happening:
According to a Seattle newspaper, office managers throughout Tacoma, Washington are hiring women to replace men as elevator operators at from 10 to 12 cents an hour less. At the same time, traffic in Tacoma's buildings has practically doubled.

I said that there were hopeful signs, too. Aircraft assembly plants are leading the way in paying the same entrance rates for men and women. Wage discrimination still exists in some plants but -- as far as entrance rates go such discrimination is the exception rather than the rule.

Several more sign posts are in the right direction. On May 28 of this year, Judge Charles H.Hayden of a Michigan circuit court handed down a decision which breathed life into the bones of the Michigan State law requiring equal pay for women workers. You remember the case -- it has been pushed around in the courts for about 4 years -- in which 29 women employees of the Olds Motor Works, a subsidiary of the General Motors Corporation, were, according to the court, subjected to salary discrimination "on the basis of sex only". The 29 women workers were entitled to recover $55,690 in back wages from the corporation. More significant than the wages recovered, however, was recognition by the Court of the fact that over a six-year period, the women, in the words of the judge's decision, "had to turn out the same quality and quantity of work as men similarly employed. If they did that, the women would be entitled to equal pay." The court denied a contention by the corporation that work of the women differed in "character" from that of men similarly employed and held that "any differentiation exists only in theory rather than in fact; in form, rather than substance."

Only a few weeks before the Michigan Court decision, William P. Witherow, President of the National Association of Manufacturers, said in a speech in New York, "It has been clearly shown that there is little difference between men and women as regards satisfactory performance in industry."

A national policy concerning women's wage rates in war industries is in the making. A statement of policies by the War, Navy, and Labor Departments in January 1942 included the recommendation that "wage rates for women shall be the same as for men, including the entrance rates". In August a panel of the War Labor Board -- in an important case involving pay differentials between men and women -- recommended to the full Board that:

women who perform work which is the same in all material respects as that performed by men shall receive the same wages as men." The United Automobile, Aircraft, and Farm Implement Workers and the United Electrical, Radio, and Machine Workers of America joined forces to present a strong case to the War Labor Board and the Women's Bureau helped prepare a section of the brief. The men as well as the women realized that lower wage rates for women threatened the higher wages for men -- especially with more men being called away from their jobs into the armed services. On September 17 the Board unanimously accepted the recommendation. The final ruling of the War Labor Board in this case will have far-reaching consequences for every wage earner, man or woman.

The auto workers and the electrical workers in this labor board case were carrying out the policies laid down at their national conventions calling for pay rates for the job without sex differentials.

More women belong to trade unions today than ever before in our history -- almost 3-1/2 million. The labor movement has a great stake in this struggle for equal pay.

From other unions come developments for women in their ranks -- some good news, some not so good. From San Francisco it was reported that women grocery clerks in three large counties will get the same pay as men under the terms of an arbitration award by the Federal Conciliation Service. The union had reached an agreement on wage increases, leaving only the matter of equal pay for women to be arbitrated. --- The Amalgamated Association of Street, Electric Railway and Motor Coach Employees said recently in its official publication, "Equal pay for equal work whether performed by men or women is a principle which the Amalgamated Association has established and maintained in the face of bitter employer opposition." The Los Angeles C.I.O. Council last July, in a conference on women in industry, urged equal pay for work, revision of the State sanitary code, rest periods, and more governmental supervision of occupational diseases and accidents. A few weeks later, in August, the National Council of the National Maritime Union responded to some "prodding" from the seamen's wives who attended a national conference of the NMU auxiliary, by going on record for wider opportunities for women and opposing discrimination against them. The statement said in part, "Especially within the trade unions should a wider consideration be accorded to the tremendous vitality which these women, most of them without tradition or knowledge of trade unionism, can bring to the organization." Because of prejudice, the resolution stated, "women have handicaps placed in their way, and discrimination imposed upon, that limit their all-out efforts, dampen their enthusiasm, and in many ways hamper them in giving everything they could in this war emergency."

You and I also know that the high-minded national policies of the unions regarding their women members have real meaning when they are put into practice in the locals and in the shops and not before.

On the other side of the ledger we also have this word from San Francisco:

"Union controversy over the employment of women shipyard welders encountered a War Manpower Commission edict today that women are needed to produce ships and will be put to work within 48 hours.

"Women welders have been refused clearance by the A. F. of L. Boilermakers' Union to work at the Sausalito yards of Marinship because of lack of "proper facilities". William Hopkins, regional WMC director, conferred with union heads and others today and issued this statement of policy.

"1. We have to build ships.
"2. We must employ women.
"3. Women will be employed within 48 hours on work for which they are now qualified.
"4. Sanitation and health safeguards will be provided."

The WMC statement followed an announcement by the International Boilermakers and Welders Brotherhood in Kansas City that in Nation-wide balloting about 400 to 600 locals favored the inclusion of women in the union, but that the vote had been too light, a 50 percent vote being required to make a poll binding. Only about 20 percent of the membership voted." We hear now the women will be granted work permits.

It would take a great deal more time to tell the complete story of women in war production, their wages and working conditions. But even this brief review of some of the national and regional developments should show us more clearly the job that must be done by the Women's Trade Union League, the whole labor movement, and Government. What must be done, that is, if we are to move -- and not crawl or fall back -- along the road of industrial democracy and full industrial citizenship for women workers.

The induction of millions of women into war employment is, in itself, a tremendous undertaking. But the war emergency must not be used as an excuse for destroying sound labor policies. It is our business to see to it that we maintain basic work standards which experience has shown are necessary for the health and efficiency of all our workers, the standards which result in maximum production. Nor can we merely hold fast, we must go forward. Equality of opportunity must have meaning for women in the shop -- their pay rates must be based on their jobs without artificial discrimination based on sex. "Our democratic way of life" must reach into the everyday experience of millions of men and women through organization of the workers into strong unions, through collective bargaining and the other democratic methods of self-government in the shop. In all of this women must carry their full share of the load -- do more than pay dues -- serve on grievance committees, negotiate wage contracts, work on labor-management committees wherever they are set-up.

The battle on the home front demands of us double energy: We must produce the weapons of war; we must develop the machinery of industrial democracy. We are already building our post-war world. What we do now -- and the way we do it -- determines the strength of the bridge we build into the future.

WOMEN'S JOBS IN WAR INDUSTRIES

Speech by

Mary Anderson
Director, Women's Bureau
U.S. Department of Labor

At the Convention of the
American Management Association
Chicago

February 6, 1942

WOMEN'S JOBS IN WAR INDUSTRIES

I am very glad to have this opportunity to talk about women's jobs in war industries with personnel directors and factory managers—the tremendous production effort demanded of industry for the months to come will lie to the greatest extent on your shoulders.

The time has passed when an employer could depend solely on men to fill his work benches and his drafting tables; no more can he believe that the labor supply of men is plentiful or that he can hire it away from some competitor, at a higher wage. And of course the time is long past when jobs in factories can be described as requiring "a strong back and a weak mind." I saw a news item the other day where someone said that the delicate essentials of airplane construction can be done very well by women, at the sacrifice only of long fingernails.

There has been an overnight shift in women's position; the sudden entrance of the country into war has moved them from the second line of defense workers to the front line. It probably will be necessary to use them to the fullest extent, according to General Hershey and Colonel Battley (who is chief of the labor section of the War Department).

Women are not yet employed as extensively as war workers as they are in factory work in peacetime. By war workers I mean those employees who have been added to the labor force of the country, in whatsoever capacity, because of the war production program. That this is changing rapidly is shown by information we have collected on our visits to plants made since December 7th. The Women's Bureau made some surveys last year of defense industries, and now we are checking on the progress made in the employment of women since that time. For example, the following story of how one company took care to place women most efficiently is of great interest:

In April, an airplane assembly plant as an experiment employed 16 girls, and placed some of them in the covering and paint departments, others in electrical assemblies. The experiment was so successful that at the end of the year they were employing 500 women but also they were utilizing women in nearly all productive processes throughout the plant, including the machine shop and even on the final assembly. Most of the jobs on which they start the girls in this plant take only a few days of breaking in and then the girls are upgraded through in-plant training and supplementary courses. However, about 80 or 90 percent of the girls had had either factory experience in other industries or pre-employment training. The plant has these courses 24 hours a day and all are open to women. In addition to other courses some are taking riveting and sheet metal work. (This is the only plant visited by the Women's Bureau to date where all in-plant courses are open to women.)

This is the plant whose total employment rose from 1,255 at the beginning of 1940 to 4,500 by the end of 1940, with no women employed at all, and in January 1942 there were over 500 women out of the 6,000 total employed.

And here are late reports from our most recent visits to other aircraft plants:

One plant having none but male employees, expects to take on 6,000 women by the summer of 1942.

An aircraft assembly plant is making plans to take more women; at present they have 27 women on the production line, and this may increase to 2,000 by summer. They will first be tried in the electrical department and on small precision assembly.

In another aircraft assembly plant, consideration is being given to future employment of women; they are being seriously considered for light woodwork operations, electrical assemblies, taping and doping, and tube assemblies at present. There is one woman engineer in this plant, and 9 women only on the production line.

One large company with branch plants in different parts of the country is trying out women in one of its locations, with the expectation of hiring them elsewhere as soon as results are known and plans formulated for various occupations.

As to what might be the picture, if we follow the same pattern as shown in British experience, the aircraft plants in this country employ only an infinitesimal proportion of women, whereas in England they comprise 40 to 50 percent of the workers. In small arms ammunition, 40 percent of the workers in this country are women, compared to 80 percent in Wales.

What are the prospects for women's being readily absorbed into the rapidly expanding production program?

In the first place, new jobs have been created through the break-down of "big" processes into the simpler and less skilled operations. The phenomenal need for more workers to produce more fighting equipment makes mandatory a job analysis, to break down certain processes so that they will be within the reach of the great potential woman labor supply. A new tooling up may be necessary. Shorter training periods are called for. Haste in production is the order of the day.

These jobs constitute a sort of no-man's land in regard to occupations and sex. They are restricted by no traditions as to whether they should be done by men or women. To draw hard and fast lines between men's and women's jobs is out of the question. The recruitment of women is easier than that of men simply because there is a larger volume of women ready to be hired.

Last week Mr. Hillman said more than 1,000,000 women will be needed to work on the production of war materials for our "long, hard war."

In our present surveys we are finding that women are being employed in the machine shops, on the assembly lines, and at inspection posts.

I was asked to make a fairly quick presentation of major points, as I understand questions will follow. So I read now a list of occupations.

Some jobs can be done equally well by men or women, such as—

Milling machines
Light punch and forming presses
Bench and watchmakers' lathes
Burring, polishing, lapping, buffing--on lathes
Packing, labeling

Some jobs can be done even better by women because of certain peculiarly feminine qualifications: Painstaking, tedious work requiring great patience, finger dexterity. Women adapt themselves readily to repetitive jobs requiring constant alertness if not skill, strong fingers and tireless wrists, with no flagging. Examples are:

Drill presses
Assembly—all types
Winding coils and armatures
Soldering
Taping
Painting—all kinds (spray, stencil, radium, touch-up)
Visual inspection

But women can do certain notably skilled work, after training. Women have the ability to work to precise tolerances, can detect variations of ten-thousandths of an inch. Women can make careful adjustments at high speed with great accuracy. Illustrations of such skill are:

Welding
Sheet metal forming and riveting
Light turret lathes
Light-duty hand, and automatic, screw machines
Setting-up machines
Production, planning, routing
Tracing, drafting

You will want to know what particular war industries the Women's Bureau has surveyed, because it is these studies of ours that form the basis for the preceding evaluation of occupations.

We have been in aircraft-assembly plants, in aircraft-parts plants, in ordnance plants making ammunition for small arms and for artillery, in machine-tool plants, in various plants making instruments such as aircraft instruments (speed indicators, altimeters, gages, and so forth), optical, surgical and dental instruments and fire-control instruments. By the latter I mean the auxiliary equipment of a heavy gun for controlling its fire, proper aiming, and setting the shell fuze.

We have been in New England, in the Far West, in Texas, in the Middle West, on the eastern seaboard.

We have summarized the principal operations and have appraised the employment opportunities for women in the various plants in these industries. In our reports you will note we have shown whether the operations at present are performed by men or women, whether the proportion of women could be increased, whether women could be used entirely, and where with some training women could be used. And we have been frank to say if the job is not suitable for women at all. I am going to take each of these industries and indicate very briefly what our findings have been:

In aircraft assembly, one-fourth to one-third of the jobs might be filled by women. To mention a few of the departments:

Fifty to 75 percent of drill press work could be done by women, after training.

Fifty percent of the bench work could be done by women.

All of the jobs in tubing could be done by women.

Twenty to 25 percent in fuselage could be done by women.

Thirty-five percent of the jobs in work on wings and 70 percent of the work on control surfaces.

Twenty percent of the jobs in press and metal forming could be done by women.

After experience in simpler machines, women can operate light turret lathes and hand-screw machines, shaping cylindrical surfaces.

In contrast to the aircraft industry, the plants making ammunition for small arms and for artillery already employ large numbers of women. Of 28 operations in small arms ammunition, women were the only workers on 7, and it was considered that women could be increased or used entirely on 12 others (the remaining 9 were unsuitable for women, due chiefly to the physical strength required). In the heavier artillery ammunition, of the 46 operations observed, 6 were entirely in the hands of women, 29 could greatly increase the use of women, and 11 were considered unsuitable. In the mechanical time-fuze department of a Government arsenal, three years ago only 2 percent of the workers were women, now 96 percent are women, and more fuzes are being produced per employee than ever before. There has been a complete change in the break-down of operations.

In plants making instruments, women could do 75 percent of the assembly work in aircraft instruments. Binoculars are the only fire-control instrument on which women are employed extensively; women undoubtedly could be trained to do some of the work on optical instruments. More women could be used in surgical and dental instrument making, though the former would never afford any marked opportunity for women; in the making of clinical thermometers women are now employed on all the major processes.

Women have been definitely handicapped by lack of training. So is anyone—but my point is that the vocational training courses have not been opened to women as readily as to men, and in some important cases, not opened to them at all. We wanted women to have a place in the defense training program which would give them a start or send-off in the manipulative skills in machine operation and bench work, in inspection, and so on.

Of 1,778,000 persons given training in the vocational training classes for National defense, since the beginning of the program in July 1940, about 17,000 were women (less than 1 percent). These figures are up to December 1, 1941, and since then presumably more women are admitted. The N.Y.A. has trained women up to 25 years of age for defense industries, and the W.P.A. has given training to some women.

I am talking of course not about sewing power-machine operator courses or cooking or nurses' aide training—but training in metal work, in electrical assembly, and the like.

It seems to us that there should be a more noticeable trend toward hiring older women, for dropping the bars against women in their late thirties, or even in the forties. Some of these have had excellent industrial experience. A California Department of Employment report shows that some employers were of the opinion that the upper age limit would be extended to 40 or even 45 years of age, and in this survey there was found to be no noticeable increase or decrease in productivity in relation to age although the companies generally believed that women over 35 would be less desirable workers than the younger women. Conditions now are not peacetime normal conditions—the middle-aged woman whose experience and adaptability demonstrate fitness should be hired.

Most recent reports from our current visits to plants indicate that pre-employment training is not considered necessary for the jobs women are being hired for, and I look to immediate widespread hiring of women for the so-called first jobs in the factories, the simpler semiskilled ones.

If women are to progress and be effectively employed, they should not be restricted to the least skilled jobs, and we want to see supplementary training opened to them. All aircraft manufacturing centers have training programs for men, for example, but only in one plant—of all those visited by the Women's Bureau to date—do we know that all the supplementary courses are open to women, that they can enter any course they choose. We would like to see women taught the related skills, such as blueprint reading, shop mathematics, speeds and needs of cutting tools, use of scales and micrometers. Our recent visits to plants show that women are taking blueprint reading wherever such courses are open to them; other courses chosen by them are machine shop, sheet metal, riveting, drafting. In one plant a few women were receiving supplementary training as lead men and supervisors, but in its elaborate apprenticeship training program no women were found. An ordnance plant in the Middle West sent 20 women and 205 men East for special training in a Government arsenal, so that on their return they could train new employees.

You will note in our surveys and evaluation of occupations suitable for women, how many of the processes and jobs could be satisfactorily handled by women if only they had supplementary training.

I want to emphasize the availability of trained professional women for plant jobs other than the production-line jobs. A news item the other day said that electrical manufacturing companies are asking for women college graduates who have concentrated in methematics, chemistry or physics, to serve as assistant engineers for work on estimates and mathematical computations, some women will also be able to find positions as radio physicists and technicians. A large manufacturing concern wanted a woman college graduate trained in mathematics to teach shop mathematics to mechanics who are taking in-service training.

Some of the engineering schools of the universities are opening their defense training courses to women. The courses qualify women for positions as draftsmen, inspectors, supervisors, engine testing, computation, and a wide range of precision work. There were, in November 1941, 4,436 women enrolled in these courses in 124 colleges and universities.

Supervision of women presents no different problems than supervision of men, but if the foreman resents the introduction of women into the plant—be it conscious or unconscious on his part—or if the men themselves dislike the presence of women in the once monastic atmosphere, there is not likely to be that smoothness or efficiency that results in adequate production. Certainly the personnel officials, and management itself, should be aware of any attitudes that would hinder the plant's highest efficiency.

A California survey, made by the California Department of Employment, of plants employing women in war production showed that as a whole men and women employees worked satisfactorily together. In all the plants surveyed men and women were employed on the same job at the same rate of pay, very often working side by side. One employer preferred to have the men and women work together and believed that the women's higher rate of production would result in an increase in the men's rate of production. In some, it was found that the men employees had at first resented the employment of women, ridiculing the idea and working with the women only in a condescending manner. In one plant, resentment on the part of the various supervisors was the most formidable obstacle in introducing women workers; these men had not previously supervised women and at first found it disagreeable. Within a short time the men who were in charge of women workers agreed that they were at least as easy to supervise as were men. The men workers felt women should be employed on the less skilled jobs, small machine operations, and inspection, and resented the employment of women on machines requiring unusual mechanical ability. Of course, the theory that "women have no mechanical ability, interest, or aptitude" was exploded in the last World War.

In all of the plants visited in this California survey, the employment of women was found satisfactory; in all instances there was an increase in production per hour of work and a lowering of the cost per unit.

Reports we received in January from our own plant visits are of interest:

> In one large plant (aircraft) all foremen seemed satisfied with women.
>
> A foreman in the electrical assembly department of an aircraft plant said that only a small part now of the force were women but he would use them on all jobs in his department if he could get them.
>
> Firms in instrument-making, with large numbers of women, found them satisfactory and made no mention of the disciplinary problems feared by other employers.
>
> One aircraft firm, when our agent visited it, said discipline was a bad feature of mixed groups; our agent did report that the discipline seemed bad, many of the workers were out of supplies, and there was considerable talking and playing among mixed groups of boys and girls; when it was pointed out to the plant official that this was due to lack of supervision and proper management, he agreed that this was true.

We believe that it is important to have a woman personnel official on the administrative staff. In some plants we have visited, a woman is in charge of personnel matters where women employees are concerned or plans are under way to employ one as soon as the extra numbers of women are hired. But in others there is only a matron or so-called hostess in charge of the women's service rooms; these act as counselors to the girls in some plants.

Working conditions are good, in the plants we have visited. The Women's Bureau recommends the 8-hour day—with 3 shifts if necessary. We recommend that wage rates for women, including the entrance rates, be equal to those for men workers. As to night work, we believe investigation of each plant wanting to use women on a night shift should be made by the proper State authorities to determine whether there is a real need for such employment. We believe such permission should be granted only for the duration of the war. The following standards for employment that we recommend apply equally to men and women:

Half-hour meal period with opportunity for hot meal.

Best possible lighting and ventilation arrangements.

Special effort to prevent, wherever feasible, either constant standing or sitting, through providing seats adjusted to the worker and the work

Safe work clothing, all essential accessories (cap, goggles, gloves, shoes)

Carefully guarded machines and all other safety precautions

Adequate first-aid equipment and medical department

Adequate washing, drinking, and toilet facilities, also lunch room, dressing room, rest room

Employers who decide to hire women for the first time are in some instances perturbed as to the need to make plant adjustments to women's needs. I do not feel it necessary to make comment on this; practically all plants being built now have provided service facilities for women, or can easily convert plant space for them. Some employers, we find, are waiting to add extra facilities until the extra numbers of women are hired. Only in one plant was the premium on plant space so great that adding service facilities for more women seems a deterring factor on their greater employment. The California survey shows that plant changes were necessary when women were added to the staff, but it was generally agreed the expense was relatively little. We can give you a few figures if you will write us.

We shall be glad also to send any of you our five reports on the surveys we have made. And I want to call your attention to the bulletins we have published regarding standards of employment for women workers, also available for distribution.

Since women have become such an important part of the Nation's labor force for war production, the Women's Bureau realizes that for managements hiring women for the first time certain problems are bound to arise under the many differing circumstances. Therefore, we stand ready at all times to advise individual employers and plant officials as to occupations, standards, policies, and procedures to promote women's efficiency and to safeguard their health as workers.

(WO 42-32)

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April 1942 Misc. 2977

Federal Security Agency
U. S. OFFICE OF EDUCATION
Vocational Division
Occupational Information and Guidance Service
Washington

WOMEN OF THE UNITED STATES AND THE WAR

by

Marguerite W. Zapoleon, Specialist in
Occupations for Girls and Women

Successful warfare requires action on many fronts. On most of them, American women have been engaged since the early days of the defense program. Today, they are serving in rapidly increasing numbers in the armed forces of our country, in Government agencies, in industry, in agriculture, in schools and colleges, in women's clubs, and in volunteer organizations. A review of these areas of their activity indicates how other women may serve as the war continues.

Women in the Armed Forces

We usually think only of men in the armed forces of our country. But, besides the women who type and file and those who perform housekeeping functions in the War and Navy Departments, there are 8,700 women serving as nurses in the Army Nurse Corps and another 1,000 nurses serving in the Navy. At least 10,000 to 11,000 additional nurses are needed and will be added in the near future. Also serving the Army are approximately 600 women medical technologists, 150 dental hygienists, 500 to 600 dietitians, and 300 therapy aides. Two hundred more therapy aides are needed and will be employed as soon as they can be obtained.

Much publicity was given last year to the hostess jobs in the Army, created to supply a woman's service in connection with leisure-time activities in Army camps. There now are approximately 590 women, selected from among more than 22,000 applicants, who serve as hostesses and library assistants in service clubs on military reservations. Approximately 100 trained women librarians also are working in Army hospitals.

The proposed Women's Army Auxiliary Corps will open a greater variety of Army jobs to women and will give them Army status. A bill providing for such a corps passed the House in March 1942, and is scheduled for Senate action this month. It provides for the "voluntary enrollment of women of excellent character in good physical health, between the ages of 21 and 45, who are citizens of the United States," the number not to exceed 150,000. Such a corps would have its own leaders, who would be trained for their specific duties. The members of the corps would perform those functions in the Army that women can carry on to advantage, thus freeing men for other duties. A bill providing for a similar corps in the Navy passed the House in April.

Women Workers in the American National Red Cross

Thirty-seven years ago, the Congress of the United States chartered the American National Red Cross, authorizing it to perform certain duties. One of these duties was "to act in matters of voluntary relief and in accord with the military and naval authorities as a medium of communication between the people of the United States and their Army and Navy." Today, this great agency, cooperating closely with our Government although supported entirely by voluntary contributions, has on its national staff 4,100 workers, many of them women.

The positions on the national staff and those in local chapters are filled largely by social workers, but the staff also includes many other workers trained in first aid and water safety, public health nursing, nutrition, education, and recreation. With the increase in the armed forces, there has been a rapid increase in the number of social case workers employed by the local chapters. The number of chapter workers in March 1942 was about 4,000.

Besides its regular staff, the Red Cross maintains reserve lists of social workers, nurses, and medical technologists who can be summoned in an emergency. For example, during the great Mississippi flood of 1937, more than 1,000 "reserve" social workers were employed by the Red Cross, mostly on a loan basis from other agencies. Although its reserve list of social workers and of medical technologists is adequate at present, the Red Cross is striving now to build up its reserve list of nurses to 40,000.

Volunteers, of course, form the greatest number of Red Cross workers; their activities are described below.

Women Employees in the Federal Government

The number of women workers in Government agencies has increased rapidly as war duties have increased.[1] They have been added in largest numbers in those branches of Government service which bear the greatest burden of the war effort, particularly in the War Department. On June 30, 1941, 266,407 women were employed in civilian positions in the executive branches of the Government; this number represented 20 percent of the 1,358,150 Government employees. In the following 6 months, the total number of employees had increased to 1,670,922, but statistics indicating how many of the new employees are women are not yet available.

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[1] U. S. Civil Service Commission. The first year. A study of women's participation in Federal defense activities. By Lucile Foster McMillin. Washington, U. S. Government Printing Office, 1941. 39 pp.

Although the vast majority of women workers in Government service are engaged in clerical work, the remaining number are spread over a wide variety of occupations in all fields: Professional, semiprofessional, communications, manufacturing, personal service, and agriculture.[2] Government service demand for women stenographers, office machine operators, and scientific and technical aides is acute. Among the occupations listed in the March 9, 1942, announcement of examinations open on that date were the following (those underlined were occupations in which workers were needed urgently for war work): Stenographer, typist, mimeograph operator, alphabetic card punch operator, tabulating machine operator, blueprint operator, graduate nurse, public health nurse, dental hygienist, medical technician, physiotherapy aide, technical and scientific aide, meteorologist, chemist, astronomer, pharmocologist, physicist, staff dietitian, home economist, inspector (hats, textiles, clothing, radio engineering materials, ordnance materials), engineer, engineering draftsman, engineering aid, translator, telegraph operator, multiplex operator, simplex or teletype operator, medical technical assistant, public health nursing consultant.

Women in War Industries

Although the first effect of the defense program was to increase the demand for women primarily in clerical and service occupations, as the tempo of production was accelerated and as more men were drawn off into military service, women not only began to replace men in certain peacetime jobs but they also have gone into defense plants in increasing numbers. Since war was declared, there has been general agreement that more and more women will be used in the production of aircraft, ammunition, and other types of military equipment.[3] Women in plants located for the most part on the East and West Coasts are not only assembling and inspecting small parts, tasks at which they have always excelled, but they also are working as welders, riveters, lathe operators, spray dopers, brush dopers, sheet-metal bench beginners, and as band-saw operators. In the first quarter of 1942, according to estimates of the Bureau of Labor Statistics, some 1 million of the $8\frac{1}{2}$ million employed in war production were women. The increasing use of women in war production, and the factors to be considered in employing them, are discussed in the recently issued Bulletin No. 7 of the Labor Division of the War Production Board.

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[2] Women's Bureau, U. S. Department of Labor. Employment of women in the Federal Government 1923-1939. By Rachel Fesler Nyswander and Janet M. Hooks. Washington, U. S. Government Printing Office, 1941. 60 pp.

[3] Labor Supply Division, War Production Board. Women in war production. Report to the House Committee investigating national defense migration. By Thelma McKelvey. Washington, February 4, 1942. 69 pp. mimeo. (A summary presenting facts obtained from various Government agencies.)

Thus far, the demand for women in war industries has been characterized by rather specialized qualifications for employment and by marked local and regional differences in the extent of the demand. An acute need for women of a certain type and training may still exist in one area, whereas, in another area, women who are unemployed because of plant shut-downs in industries affected by priorities may be seeking work unsuccessfully. Because orders for defense workers and applications for employment and training are now cleared through the U. S. Employment Service, the problem of adjusting demand and supply more effectively should be open to solution. A list of defense occupations suitable for women has been prepared by the U. S. Employment Service and is now being printed in the Government Printing Office.

The use and protection of women in industrial production has long been the concern of the Women's Bureau of the U. S. Department of Labor. In the summer of 1940, the Bureau, after consulting with its Labor Advisory Committee on Standards for the Employment of Women in the Defense Program, issued a bulletin which outlines the working conditions which should be observed in the employment of women in defense industries.[4] Since war was declared in December, the Bureau has been at work on the problem of amending State laws for women to permit night work for the duration, while safeguarding long-run gains in protective legislation.

Long before war was declared, the Bureau began a series of studies of the employment of women in industries handling defense contracts, such as the manufacture of aircraft, of instruments, and of ammunition. From time to time, the Bureau, through its publications[5] and conferences, has urged the training of women in certain skills which would equip them for work in defense plants--skills such as blueprint reading, micrometer, scale, and other gage reading, knowledge of metals and cutting tools, shop mathematics, and shop practice.

Training of Women for War Employment

The U. S. Office of Education is responsible for the administration of funds appropriated by Congress for vocational training for defense workers.[6] From July 1, 1940 through February 28, 1942, 40,000 women have been enrolled in the program, of whom 27,000 have completed their training and 13,000 were still in training on the later date. They were taking training in such subjects as: Machine shop, welding, aircraft assembly, sheet-metal inspection, radio communications, airplane ground work, and drafting. Since late 1941, many more women are being trained for the increasing number of jobs that will be available to them in defense plants as more men are drafted. There are, in addition, more than 50,000 girls and women enrolled annually in the regular day trade and industrial classes which are reimbursed from Federal funds. During the year ended June July 30, 1941, 90 percent of the girls in these day classes were being trained for industrial and service occupations in which according to Census statistics women predominate in normal times. These occupations included power-machine operation, dressmaking, millinery work, cosmetology, restaurant service, laundry work, assembly and other light factory work, household service, practical nursing, and dental hygiene. Seven percent were enrolled in art, music, and handicrafts courses. A still smaller number, about 3 percent, were being trained along with men and boys, in auto mechanics, radio shop, machine shop, upholstering, shoe repairing, watchmaking, drafting, printing, woodworking, jewelry making, and cleaning and dyeing.

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[4] Women's Bureau, U. S. Department of Labor. Effective industrial use of women in defense program. Washington, U. S. Government Printing Office, 1940. 22 pp.

[5] The WOMAN WORKER, published bimonthly by the Women's Bureau, carries current articles and reports, and announces special bulletins on the status of women in industry.

[6] U. S. Office of Education, Federal Security Agency. Misc. 3489. Training women defense workers. By Louise Moore. Washington, U. S. Office of Education, January 9, 1942. 9 pp. mimeo.

During the second half of 1941, 195,088 girls employed on National Youth Administration projects enrolled in related training courses operated by the public schools in cooperation with the U. S. Office of Education. Of the total number, 115,742 received some type of home economics training (child care, nutrition, care of the sick, quantity cooking, table service, etc.), and the remaining 79,346 were enrolled, for the most part, in clerical or power-sewing courses. In January 1942, more than 16,000 girls were gaining work experience on National Youth Administration work projects in occupations related to defense work, including welding, machine shop, radio, and sheet-metal work. An additional 54,000 were engaged in secondary defense activities on projects concerned with child care and nutrition.

To meet the needs for training in the plant as women workers are introduced in war industries, the field staff of the apprenticeship unit recently transferred from the U. S. Department of Labor to the Federal Security Agency and the State apprenticeship councils have been adding women members to assist defense plants in installing and improving upgrading and training programs for women employees.

The Work Projects Administration also has trained women for work related directly and indirectly to the war effort. In addition to the 683 women WPA workers who were trained for riveting, machine shop, aircraft manufacturing, and electrical servicing under the vocational defense training program described above, 230 were trained directly in defense plants. Local WPA officials have been instructed to place more and more women in defense occupations and in training projects for them. In hospitals in 18 States, 4,000 institutional workers have been trained to serve as attendants in clinics, hospitals, and other institutions.

The number of girls and women entering agricultural courses operated through the U. S. Office of Education under the Out-of-School Rural and Nonrural Youth Training Program is increasing. According to the latest available figures, 1,409 women in 36 States had taken such training prior to January 1, 1942. Girls are enrolled in largest numbers in auto truck and tractor driving courses and in metal shop. Statistics are not available for the past year which would show the number of girls and women in the day and evening federally reimbursed classes in agriculture operated under the regular program, but many women are enrolled in evening classes, especially in poultry and in gardening.

The Engineering, Science, and Management Defense Training Program, administered by the U. S. Office of Education in cooperation with colleges and universities, had enrolled 10,908 women out of a total enrollment of 361,977 in the 20 months of its operation up to March 1, 1942. Most of the women enrolled were admitted during the fall of 1941 and the winter of 1942, and were studying such subjects as: Engineering drawing, production engineering, safety engineering, inspection and mechanical engineering, accounting and statistics, as well as personnel administration and labor, communications, and other engineering, science and management subjects. Those in charge of this program anticipate that an urgent need for women trained in these courses will develop in the near future.

Under the Civil Aeronautics Training Program, 2,450 women completed civilian pilot-training courses. However, since July 1941, this program has been devoted entirely to the training of military pilots, and women are no longer admitted.

The nursing training program, for which Federal funds first became available in July 1941, is administered by the U. S. Public Health Service, with the advice and assistance of the Defense Health and Welfare Services of the Federal Security Agency.7/ To meet the overwhelming demand for trained nurses, 265 nursing programs in accredited nursing schools are receiving Federal funds to enable them to train additional numbers in undergraduate and postgraduate courses, as well as to offer refresher courses to inactive nurses. In addition to the more than 40,000 students comprising the usual annual enrollment of entering students of nursing, the spring program should take care of a proposed increase in student admissions of 6,690 (3,244 refresher, 2,472 basic undergraduate, and 974 postgraduate). Enrollment in schools aided under the program already has increased 34 percent as compared with a 9 percent increase in enrollment of other nursing schools.

7/ Plan of training for nurses under the national defense program. Public Health Reports 57: 307-12, February 27, 1942.

Women's Activities in Schools and Colleges

Our schools and colleges, aside from their participation in the nursing and engineering training programs already described, are contributing their share to the war effort. Teachers, most of whom are women, and school administrators will find suggestions regarding suitable war activities in the Education and Defense Pamphlets issued by the U. S. Office of Education, and in its new periodical Education for Victory, issued twice monthly, which carries reports of the work of the Wartime Commission and other information related to the schools and the war. In addition to school activities, teachers are called upon to aid in the registration and training of volunteers and in the registration incident to rationing.

Women in many colleges have undertaken special projects. Russell Sage College in Troy, New York, was one of the first women's colleges to organize for defense.[8] Its five-point program provided for: (1) Forum discussions related to the war; (2) the expansion of regular courses to train more women for such occupations as nursing, medical laboratory work, and secretarial work; (3) training for volunteer work in home nursing, emergency feeding and nutrition, auto and ambulance driving, mail censorship, household mechanics, clerical work; (4) increasing emphasis on health and physical education; (5) cooperation with local agencies in registering and training local women for emergency volunteer services. The war program of the University of Iowa Women's Association suggests that the period from 4 to 6 p.m. daily be devoted to some phase of war work; meetings are scheduled for that period twice a week so that the girls may discuss pertinent problems while knitting and sewing for the Red Cross. Hunter College girls have established headquarters where defense stamps are sold daily. Their joint student-faculty committee has planned a program which provides for: (1) Protection of the college buildings and preparations for air-raid shelter; (2) courses in first aid, radio, air-raid precautions, motor mechanics, sewing, and orientation in problems of the war; (3) plans for community service under which students perform emergency messenger and other services, instruct others in such volunteer services, and assist with entertainment programs for service men. The Youth Activities Division of the Office of Civilian Defense reports the following types of subcommittees on college defense committees: Air-raid protection, auxiliary fire-fighting, health and medical services, publicity, conservation, consumer, money raising, USO, training courses, civilian morale, and civilian volunteer office.[9]

The American Council on Education is publishing current information on war opportunities for college women in its War-Service Opportunities bulletin.

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[8] Russell Sage College. A suggested defense program for women. Troy, N. Y., Russell Sage College, August 1, 1940. 9 pp.

[9] Office of Civilian Defense, Division of Youth Activities. Information bulletin for immediate release to colleges and universities regarding college defense committees. Washington, Office of Civilian Defense, January 1, 1942. 3 pp.

Women on the Home Front

Following the lead of the early defense program when a woman was serving on the Commission of National Defense to represent consumer interests, much emphasis has been placed on nutrition. In May 1941, the President called a national nutrition conference to meet in Washington. This was followed by State and local conferences. The Office of Defense Health and Welfare Services in the Federal Security Agency, the Bureau of Home Economics in the Department of Agriculture, the Home Economics Service in the U. S. Office of Education, the Home Economics Division of the Extension Service in the U. S. Department of Agriculture, and the Children's Bureau in the U. S. Department of Labor have cooperated with colleges, the American Home Economics Association, and other organizations in preparing programs and publications designed to help homemakers plan well-balanced meals, eliminate food waste, and reduce malnutrition. Conservation and thrift in the home are also being encouraged in all consumer publications. Some contributions which home economics educators can make to the solution of family problems arising out of the national emergency are suggested in an outline prepared by the Home Economics Education Section of the American Vocational Association and published by the U. S. Office of Education.[10]

The problem of the care of young children in families where the mother is working or is ill has been receiving attention. The U. S. Children's Bureau has recently published material on the day care of children of mothers working in defense areas.[11] During the year 1941, the Work Projects Administration not only operated a number of nursery school projects and employed 65,000 women on WPA school lunch projects, but also prepared 38,500 housekeeping aides to take care of underprivileged households in which the mother was ill and a social agency indicated that household help was needed.

National Women's Organizations and the War

Women's organizations have responded to the emergency in many different ways.

When the defense program first began, the American Home Economics Association and many other professional groups polled their membership to register their availability and special skills. The national professional organizations in the field of nursing, for example, formed a Nursing Council on National Defense and cooperated in a Nation-wide survey completed

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[10] American Vocational Association, Home Economics Education Section. Misc. 2930. Some contributions which home economics education can make through school and community programs to the solution of problems families are facing in the national emergency. Washington, U. S. Office of Education, Federal Security Agency, 1941. 4 pp. mimeo.

[11] Children's Bureau, U. S. Department of Labor. A community program of day care for children of mothers employed in defense areas. By Emma O. Lundberg. Washington, Children's Bureau, Jan. 1942. Reprint from The Child 6: 152-61.

June 1941, in which records on approximately 200,000 nurses were obtained by questionnaire. When the National Roster for Scientific and Specialized Personnel was started by the National Resources Planning Board, professional groups cooperated by supplying lists of their members to whom questionnaires were sent by the Board to determine their availability and their qualifications for specialized wartime services.

The National Federation of Business and Professional Women's Clubs, Inc., is establishing a master file of its 76,000 members so that those having needed skills can be located quickly. Its vocational series published monthly in Independent Woman discusses occupations for women that are related to the war. In addition, local clubs are urged to aid and cooperate with established defense councils and to disseminate pertinent information to members through a defense committee. The International Association of Altrusa Clubs, the American Association of University Women, and many other national women's organizations have recorded the vocational and avocational skills of their members and the facilities they might make available in an emergency. The American Association of University Women has cooperated in the formation and operation of State and local defense councils and has urged the appointment of able women to serve on them. In addition to aiding in the establishment of local civilian defense volunteer offices and in the enlistment and registration of volunteers, its 921 branches are active in such areas as: Community education on war problems and issues, leadership on matters affecting education, the study of international relations, welfare services, consumer-interest study and activity, conservation of materials, initiation of programs, defense saving, housing, recreation and morale, and the employment of women in the war program. To encourage high standards in volunteer work, the A.A.U.W. published a "Code of Ethics for Volunteers" which has been adopted for use by civilian defense volunteer offices.

The National League of Women Voters, recognizing that the necessity for citizen understanding of Government is greater during a war, is endeavoring, through the enrollment of its members for that purpose, to carry information about Government to the widest possible public. About 50,000 copies of 5 broadsides already have been distributed as part of the League's wartime service, among them "Bigger Taxes Are Better Taxes" and "Civilian Defense and Your State and Local Government."

The National Women's Trade Union League publishes current war information in its Life and Labor Bulletin, and is urging the increased use and training of women in defense industries.

The General Federation of Women's Clubs, in addition to urging its members to back their community programs and to aid the Red Cross, also has been active in promoting the appointment of women on State and local defense councils and in cooperating in the work of these councils. The

Federation has emphasized hemisphere solidarity by encouraging scholarships for Latin American and South American students and by urging the compulsory teaching of Spanish in the public schools. In June 1941, the president of the Federation called together representatives of 100 women's organizations to discuss cooperation in the defense program, and in January 1942, 1,000 women club leaders attended a national defense forum arranged by the Federation to stimulate activity. The Federation's program operates under a national defense department and 14 committees. The promotion of the sale of defense savings bonds and stamps has been especially successful.

Younger women and girls, too, are helping through their local and national organizations. Typical are the activities in which 44,000 Girl Scouts can render service in the war effort through Girl Scout Senior Service Bureaus.[12] Senior Service Scouts are scouts who meet certain basic requirements and who volunteer to prepare themselves to perform certain services under both normal and emergency conditions in such fields as: Child care, food preparation and serving, transportation and communication, and shelter, clothing, and recreation. Many Girl Scout camps, council houses, and other facilities have been made available to other organizations for use in war work.

Similarly, in the rural areas, the 800,000 4-H Club girls together with their 40,000 local leaders are engaged in a "National Seven-Point Victory Program" which provides opportunity for service, particularly in the production and proper preparation of food, and in the conservation of food and other products needed for the war effort.[13] Increasing attention is being given to various ways in which 4-H girls can serve in their community in war emergencies, as, for example, in preparing homes for use in emergencies and in the care of evacuees.

Women in Volunteer Services

More and more women are volunteering their services as individuals in their own communities through local civilian defense volunteer offices, of which there are now 2,154.

At first, volunteers applied directly to the agency where they thought their services might be needed. But as the number of volunteers increased and duplication was evident, the need for community clearance was apparent. Troy, New York, was one of the first cities to arrange for a city-wide registration of women volunteers for defense work. The Volunteer Bureau of the Troy Council of Social Agencies set up a file of approximately 5,000 women who registered voluntarily in December 1940, during 2 days designated for that purpose by the mayor. Other cities followed suit and, since the organization of State and local defense councils, all citizens are urged by the Volunteer Offices Section of the Office of Civilian Defense to volunteer through the local civilian defense volunteer offices rather than through a particular organization.[14] Inasmuch as these local offices have facts on all types of volunteer work, they can route volunteers to the places where their services will be most effective.

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[12] Girl Scouts, Inc. What can I do to help? New York, 155 E. 44th Street., 1940. 15 pp.
Girl Scouts, Inc., SSS. Senior service scouts and the defense program. New York, 155 E. 44th St., 1941. 24 pp.

[13] Extension Service, U. S. Department of Agriculture. National 4-H victory program. Washington, Extension Service, 1942. 10 pp. mimeo.

Some of the women among the 5,601,892 citizens who had volunteered through their local volunteer bureaus up to January 31, 1942, are enrolled in the aircraft warning service, in the U. S. citizens' defense corps (as air-raid wardens, drivers, and messengers), or in community service (child care, recreation, nutrition, housing, consumer education, and health). The organization of volunteer services in these fields is described in a series of publications which the Office of Civilian Defense, in cooperation with the Office of Defense Health and Welfare Services, is publishing under such titles as "Volunteers in Child Care" and "Volunteers in Health, Medical Care and Nursing." Many women are also working with volunteer organizations.

In chapters of the American Red Cross, 2 million women volunteers are actively engaged in making garments and surgical dressings and in knitting. Many of these volunteers are participating in training courses which prepare them to serve as nurses' aides, home-service aides, motor-corps members, canteen workers, and "Gray Ladies" who do volunteer hospital and recreation work.

A new organization, the American Women's Voluntary Services, patterned after the Women's Voluntary Services in Great Britain, has women members in 23 States who are preparing for volunteer service in times of emergency. They are taking courses in first aid, map reading, running repairs, telephone operating, nutrition, mass feeding, civilian protection, fingerprinting, home gardening, and physical fitness. They also are serving as hostesses at service clubs and as assistants at draft clinics.

Many members of the Ninety-Nines, the Women Flyers of America, and the Aerial Nurses are cooperating with the Civil Air Patrol in the Office of Civilian Defense in mobilizing civilian planes and pilots for wartime duties. In some areas, women's squadrons have been organized. The purpose of the patrol is to enlist citizens with aviation experience as pilots, mechanics, radio operators, control-tower operators, and ground personnel. But a certain number of auxiliary workers without prior aviation background will be needed, according to the headquarters office. A wing of the Civil Air Patrol is organized in each State, and there is scarcely a local unit which does not have several women members. Women flyers have taken off as observers, are drilling and practicing with their units (a minimum of 230 hours of intensive study is required), and in many cases are performing auxiliary work such as clerical service and ground transportation.

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[14] U. S. Office of Civilian Defense. A civilian defense volunteer office. Washington, U. S. Government Printing Office, 1941. 27 pp.

There now are and will be many other specialized types of volunteer services in which women will engage. Coordination of existing activities through local defense councils is essential at the present time, so that future planning and activities may be based on a central body of facts and information.

The Main Task

Signs of duplication still appear in this quick panoramic view of the war services women of the United States are performing. But with the increasing demand for women in war services and the variety of functions they are performing, more direct outlets and better coordination are being developed. Meanwhile, for those who have not yet and may never find places in the front lines of women activities, there remains the eternal obligation of woman to do the task at hand, to prepare for emergencies, and to maintain that spirit of calm, fearless readiness upon which the life of our Nation now depends.

ADDRESSES OF ORGANIZATIONS AND AGENCIES MENTIONED

(from the staff members and publications of which information for this publication was obtained)

American Association of University Women, 1634 Eye Street NW., Washington, D. C.
American Council on Education, 744 Jackson Place NW., Washington, D. C.
American Home Economics Association, Mills Building, Washington, D. C.
American Red Cross, National Headquarters, Washington, D. C. (There also are local chapter headquarters and regional offices.)
Apprenticeship Unit, Federal Security Agency, Washington, D. C. (Also State Apprenticeship Councils at State Capitols.)
Army Nurse Corps, War Department, Washington, D. C.
American Women's Voluntary Services, Inc., 295 Madison Ave., New York, N. Y.
Bureau of Home Economics, U. S. Department of Agriculture, Washington, D. C.
Children's Bureau, U. S. Department of Labor, Washington, D. C.
Civil Air Patrol, Office of Civilian Defense, Washington, D. C. (There are local units and State wing commanders.)
Civil Aeronautics Authority Training Program, U. S. Department of Commerce, Washington, D. C.
Engineering, Science, and Management Defense Training Program, U. S. Office of Education, Washington, D. C.
Extension Service, U. S. Department of Agriculture, Washington, D. C.
General Federation of Women's Clubs, 1734 N Street NW., Washington, D. C.
International Association of Altrusa Clubs, Inc., 540 North Michigan Avenue, Chicago, Ill.
Girl Scouts, Inc., 155 E. 44th Street, New York, N. Y.
Home Economics Service, Vocational Division, U. S. Office of Education, Washington, D. C.
Hunter College, New York, N. Y.
National Federation of Business and Professional Women's Clubs, Inc., 1819 Broadway, New York, N. Y.
National Youth Administration, Federal Security Agency, Washington, D. C. (Local and State offices.)
National Youth Administration Related Training Program, U. S. Office of Education, Washington, D. C.
National League of Women Voters, 726 Jackson Place NW., Washington, D. C.
National Women's Trade Union League, Machinists Building, Washington, D. C.
Ninety-Nines, 718 Jackson Place NW., Washington, D. C.
Office of Defense Health and Welfare Services, Federal Security Agency, Washington, D. C.
Out-of-School Rural and Nonrural Youth Training Program, U. S. Office of Education, Washington, D. C.

Public Health Service, Federal Security Agency, Washington, D. C.
Superintendent of Nurses, Navy Department, Washington, D. C.
Russell Sage College, Troy, N. Y.
Troy Council of Social Agencies, Troy, N. Y.
University of Iowa, Iowa City, Iowa.
U. S. Civil Service Commission, Washington, D. C. (Announcements of examinations are posted locally in post offices.)
U. S. Employment Service, Employment Security Division, Federal Security Agency, Washington, D. C. (Local offices throughout the United States.)
Vocational Training for Defense Workers Program, U. S. Office of Education, Washington, D. C. (State and local offices.)
Volunteer Offices Section, Office of Civilian Defense, Washington, D. C.
Women's Bureau, U. S. Department of Labor, Washington, D. C.
Women Flyers of America, Plaza Hotel, New York, N. Y.
War Production Board, Labor Supply Division, Washington, D. C.
Work Projects Administration, Washington, D. C. (Also State and local offices.)
Youth Activities Division, Office of Civilian Defense, Washington, D. C.

Speeches - 1943

a speech made in Oklahoma, March 1943, has considerable factual data

U. S. Department of Labor
Women's Bureau
Washington

WAR DEMANDS ON THE NATION'S WOMANPOWER

A TALK BY MARY ANDERSON, DIRECTOR, WOMEN'S BUREAU, U. S. DEPARTMENT OF LABOR, AT THE LABOR-MANAGEMENT CONFERENCE SPONSORED BY THE UNIVERSITY OF OKLAHOMA, OKLAHOMA CITY, March 24, 1943, Morning Session

I feel it is a real privilege to take part in this important conference on the Nation's resources and responsibilities for winning the war. The program, dovetailing as it does discussions of so many vital aspects of our emergency--and from such varied viewpoints will promote a better understanding of the whole effort.

I hope I may open up some helpful vistas on womanpower, for as a woman I have taken my cue and shall concentrate on the feminine side of our human resources. If we interpret the term "manpower" in a strictly masculine sense, we find we are not far from scraping the bottom of the barrel--as the popular saying goes. The real squeeze lies just ahead. Where can we get the additional labor to guarantee the essential fighting and working forces? That is the question before us now and the answer seems to be--WOMANPOWER.

While striving for the goal of 11 million men under arms by the end of 1943, we must at the same time add almost 3 million more workers to our total employment of 52 million. At least 2 million of the new workers must be women. To recruit these women is perfectly possible but not too simple. I would like to present both sides of the shield--to give a picture both of ~~the~~ ~~about~~ [illegible] million women already employed and the millions of women constituting the labor reserves.

almost 17

In our war economy womanpower has to be channeled in five main directions: (1) Occupational fields concerned exclusively with the business of conducting the war--these include employment in the war industries, with the armed forces, and with war-involved Government agencies; (2) employment fields meeting both war and civilian needs, such as transportation, communication, and farm work; (3) essential civilian industries and services; (4) necessary work in the home; (5) volunteer services in the community.

It took some time for this country as a whole to realize the essential and extensive part our women had to take in the waging and winning of this conflict against aggression and oppression--in fact it took Pearl Harbor and the ensuing months. Somehow the years since 1918 had blotted from many minds the facts of women's valuable role in the armament program of World War I. But in the Women's Bureau we had reason to remember. Our agency was created in the last war to promote the most effective employment of women in that emergency. With the coming of peace the Bureau was made permanent and has since studied the problems and conditions of women workers at each turn of the economic cycle.

Thus, when the Nation in May 1940 launched its so-called defense program--in the Bureau we could forsee the inevitable demand for more woman labor. Yet we found most of the defense industries did not want women and had no plans for hiring them.

June 310 or 8
300,000

The aircraft industry in the spring of 1941 was an outstanding example of this attitude. Our investigations revealed just a aprinkling of women in airplane manufacture, chiefly on sewing jobs. A week before Pearl Harbor only about 4,000 women were employed in aircraft production. In ~~January~~ May 1943, ~~209,000~~ women were employed as factory workers in the aircraft industry (including the manufacture of engines and propellors for planes.) No other war industry can match the aircraft field for sheer drama and amazing progress in dropping barriers to women.

Women are helping to turn out all types of planes, from the Flying Fortress to the Douglas Dauntless. If you can get permission to visit any of these factories today you are deeply impressed with the hundreds or thousands of women in slacks or coveralls intent on their jobs and scattered through all departments of the plant. They are at work on the assembly and preparation of electrical systems. They are skillful at the so-called spaghetti work behind the instrument board, assembling the wires that are the life lines of the bombers and fighters. They are experts at burring, at drilling holes, at riveting parts together. Some women make exceptionally good welders, losing their identities behind the protective helmet. They are engaged on various kinds of sheet metal work, and many types of careful inspection. Fliers' lives depend on women's eyes. Women are doing subassembly with hand tools, and helping with final assemblies. They can be seen crawling under the fuselage or climbing on top the nose of the plane. They are operating intricate machines--turret lathes, grinders, automatic-screw and milling machines.

You do not need to go outside this city to see how indispenaable women are in the making of aircraft. The Douglas plant here had no production employees last July. By January it had a large force, with about 1,700 women factory workers. Plant officials expect women eventually to form 70 percent of the employees. An even more striking woman story can be told about the Tulsa Douglas plant. One of our agents informed by the firm in December 1941 that plans for the labor force included no women. A recent visit to the plant revealed 4,600 women on the pay roll, 2,400 in factory work. It is anticipated that in time women will comprise 80 percent of the work force. Oklahoma plants may then vie with these in other sections, where a single aircraft factory employs 10,000 or more women.

Women will be in much greater demand by other Oklahoma industries in the not far distant future, according to analyses of the War Manpower Commission. Both Oklahoma City and Tulsa, though not among the 36 areas now having an acute labor shortage, are included in the 103 areas with a current balance of labor supply and demand.

Turning back to the national picture we see women becoming an increasingly important factor in many of the essential war industries. Manufacture of electrical equipment, which is so necessary to the war effort, can boast of more women than any otherone key war industry--that is 250,000 in January 1943. But it is a traditional employer of large numbers of women even in peacetime. The plants making ammunition for small arms and artillery now employ 100,000 women on production lines--the great majority having been taken on in the last year. A recent trend is the hiring of women by shipyards on all coasts. Women labor is increasing rapidly in work on both the Liberty ships and the Naval vessels. The March 1942 total of 2,500 woman in shipbuilding had expanded into 40,000 by January 1943. Women have gained important footholds in the manufacture of cannon and small arms, in the machine-tool shops and steel mills. They have made an entering wedge into the lumber industry and above ground work of some mines.

In countless directions women have willingly--or rather eagerly--stepped into gaps left by men called to arms or to higher industrial skills. Womanpower is being drawn on more and more for the making of war weapons and instruments--planes, tanks, jeeps, ships--bullets, shells, bombs--rifles, guns, cannon--gas masks, parachutes, rubber rafts.

And we must not overlook the women in war manufactures who fail to make the headlines--those women in traditional feminine fields, producing such military equipment as uniforms, shoes, canned goods, paper supplies--those women making monotonous and curious bits and pieces--the small but vital component parts essential for all kinds of armament. Such jobs take on a more dramatic aspect when employees realize where their part fits into the whole. I recently heard how the workers in one plant were inspired to greater output after seeing a tank run through their factory one day--I think it was a General Sherman--on which was painted in red the small part they were making. Each woman visualized her close relation to the soldier possibly relatives, on the Tunisian Front or Solomon's Islands.

Let us throw the spotlight next on the women actually working in one way or another with the armed forces--the women having the closest connection with the grim business of waging war. The fearless, clear-eyed Army and Navy nurses--in crisp uniforms if serving in hospitals within our borders--or in appropriate garb if on duty in the fighting zones in tropical or arctic regions. Working closely with them in both domestic and foreign service are such paid employees of the Red Cross as the medical-social and the recreational workers in hospitals and camps. Their assignments girdle the globe, with destinations unknown. Other women are engaged as personal service and recreational workers in Red Cross clubs in leave areas from Iceland to India.

We have heard much of the growing bands of WAACS, WAVES, WAFS, SPARS, and the latest addition without a nickname, the U. S. Marine Corps Women's Reserve. The activities of these uniformed women are legion and varied--from housekeeping duties to highly technical jobs--but all releasing soldiers, sailors, and marines for combat service.

Newspapers have played up Uncle Sam's rapidly growing brigades of clerical, professional, technical women in the executive branch of the Government. The increase has been phenomenal--from 186,000 women at the beginning of the defense program to roughly three quarters of a million today,--and, there is the continued prospect of men being replaced by women at many jobs never before open to them. For example, take an Army Air Depot, such as you have in this city, where women are engaged in the maintenance and repair of military planes. Reports show not far from 3,000 women as regular employees or mechanic learners in the depot here.

In all the various branches of transportation--whether by air, rail, bus, truck, local transit, and even by water--the infiltration of women into men's jobs has been increasing slowly but surely since our entrance into the war. In almost any railroad station these days you may discover women in many unexpected places--at the ticket window or information booth, in the baggage room or round house, cleaning or oiling an engine. When you go to an airport you may be surprised to see girls in neat uniforms handling the light baggage, announcing arrivals and departures, repairing planes, and so on. Behind the scenes in the communication field--of such vital importance to a nation at war--women are also in greater demand as engineering aides in the telephone company, as telegraph messengers, as radio operators, and techincians, and for numerous other jobs. You begin to feel that women workers are everywhere--and everywhere they are proving their mettle and merit.

And many more women are needed to answer this season's S.O.S. calls for farm labor. In some parts of the country--as far apart as New England, California, and Oregon--women recruits during the past season gave substantial aid in harvesting crops and in dairy and poultry work. But there was no woman's land army. Now we learn that such a program has been set up, with the hope of enlisting 60,000 American women from cities and towns for this purpose--their labors to supplement those of the regular farm men and women in supplying food for our civilian population and our military forces--and for the lend-lease program as well.

In addition are many other essential civilian industries and services into which more womanpower must be siphoned in war than in peacetime. The civilian population though giving up many things, must still be clothed, kept clean and in order, cared for when sick, and serviced in many other ways. Women must not only carry on their traditional work as makers of consumer goods; as saleswomen; as laundry, hotel, restaurant, and social workers; as teachers, nurses, and domestic employees. Women must also take the place of men leaving civilian jobs. Already women have stepped into men's shoes for essential operations in banks, businesses, Automobile service stations; as drivers of buses and trolleys; as tax collectors, radio announcers, elevator operators, messengers, guards and policemen--to mention a few of the most conspicuous substitutions. Many more women must be induced to enter these fields, with the dwindling of male forces.

A survey of the professions discloses doors opening to women in an unprecedented way. Women doctors, dentists, chemists, personnel directors, and lawyers are in demand as never before. We find an occasional woman as factory manager. Last week I heard Mr. A. McDonald Gordon, the labor attache of the British Embassy in Washington tell of meeting a woman in England who was a co-manager with her husband. When this woman was asked how she and her husband divided their duties, her reply was: "Why, we use the same system in the plant as at home. My husband attends to the important things and I do the unimportant ones." Then she added, "And I decide which are the important things."

In a survey of how our adult woman population can be best utilized in a war economy we must give due value to women's homemaking services. As the mothers of young children, women can make no finer contribution to the war effort than by staying at home and caring for the family. And these women should be the last to be recruited, though economic need has already driven many such mothers to assume the double burden of homemaker and wage earner.

In trying to establish employment priorities for available types of women, I feel those who have lost jobs due to curtailment of industries should be given first chance at new openings. Next in order should come other unemployed women registrants at the public employment offices. Altogether these records show over a half million women as unemployed and seeking work. Among these applicants are women in their forties, fifties, or older, who have had fine work experience or are capable of being trained. Many of them if properly considered and suitably placed can constitute an important part of our womenpower. These older women have too often been passed by in the awarding of jobs--as have other minority groups--such as the physically handicapped or those belonging to certain races--who if given the opportunity can also make good.

A third group - readily available and quickly snapped up by many employers--consists of the girls coming out of high schools and colleges.

The next class--forming a really big reservoir of labor--comprises women classified by the census as engaged in their own home housework. All told, there are not far from 26 million of these women, aged 16 to 64. On further analysis this reservoir begins to shrink. Job opportunities will be found mainly in urban areas, so we eliminate as propsects for such employment the women on farms-especially as they will be needed for agricultural work. In fact 12 million nonfarm housewives having no children under 16 constitute the most obvious labor force--and the majority of these women are under 45. In addition are the 10 million women with children under 16.

But labor can not be moved about like pawns. And women, because of heavier domestic responsibilities are less mobile than men, less free to be recruited, because of labor shortage, in other areas than their own. Moreover, localities short of labor are too often overcrowded and lacking in sufficient housing, transportation, and other essentials for inmigration of workers to be encouraged. This discussion boils down to the fact that recruitment of women must generally be conducted within the confines of a particular community, and tied in closely with the local labor demand and supply.

Possibly, therefore, the best picture of available woman labor reserve is that offered by a sample study of the Bureau of the Census last November. Women not seeking employment were asked if they could take a full-time job were one available in their community within 30 days. Based on the women who answered in the affirmative an estimated total of over 4½ million was said to constitute the ready women labor reserves. But about one-third of these were responsible for the care of small children.

Many housewives are rendering important service as volunteers, and such contributions are a highly desirable and necessary part of the war effort. Even so, some women operating in such capacity might be of greater assistance as full-time or part-time employees in essential industries or services in their communities.

Already, part-time workers are being utilized to good advantage in stores, hotels, restaurants, and so on. The question has arisen as to the possible use of women on a part-time basis in war plants, if their home duties prevent their full-time employment. England seems to find this system quite workable. And I have seen newspaper reports of some efforts in this direction in several localities having acute labor shortages in this country.

Inexperienced woman labor, even when available, must be trained for many kinds of employment in the fields now calling for workers. I feel sure you are all familiar with the various types of training programs for women. But you may be interested in recent figures along these lines. At the end of December over half a million women had received the benefit of pre-employment or supplementary courses under the system known as the Vocational Training for War Production Workers. Such training is financed by the Federal Government, sponsored by the U. S. Office of Education, and conducted by the State Vocational Education Boards, in accordance with local needs. The U. S. Employment Service cooperates in the program, women being referred to the courses by the local offices. In addition some thousands of women have been prepared for technical jobs through the free Engineering, Science, Management War Training programs in the colleges. And women have been trained in various other ways--for instance by the War Department for Signal Corps or Army airport work. A very important type is in-plant training to give women the essential preparation for their particular jobs. Such training included both orientation and upgrading courses. It is said that for almost nine-tenths of the industrial jobs, in-plant training is necessary.

Many employers have been amazed at women's ability to learn industrial processes quickly. And the theory held by some managements that women were mechanical morons has been exploded. Many employers with plans for hiring women for the first time have sought guidance from the occupational analyses made by the Women's Bureau of such key war industries as the aircraft, ammunition for small arms and artillery, war instruments, cannon and small arms, machine tools, etc.

In general we endorse the statement so often made that women can do any kind of job except those requiring great physical strength. But in evaluating war jobs on which women can be safely and effectively employed, other factors should be considered. For instance, women are generally smaller in stature than men, and can not always readily take over machines set up in terms of men's capacities. Some re-tailoring of equipment may be necessary, like adding a platform for a woman machine operator to stand on substituting masonite jigs for steel ones. Mechanical devices can be installed to prevent lifting and to lessen strain. For example, engineers in a machine tool company put a new lever on a lathe so that a woman could operate it with 70 per cent less effort than was formerly required. Such changes are also made in many plants to increase men's efficiency. Women are not all cut out of the same mold. Like men they differ greatly in their abilities to tackle various jobs.

To sum up the whole situation of women's adaptability to jobs generally regarded as masculine, I would like to give some of the high spots in a report from a manager of an important war plant, after his 10 months of experience with women workers. He declared, "Frankly it was with some misgivings that we hired the first batch. Today, we have close to 3,000 women on production and service operations. Most of the women have had no previous factory experience whatsoever." He added: "We like women." Here are some of the reasons he gave: They are more precise in their work--better housekeepers-- more patient than men--eager to learn--better on repetitive work--often more conscientious and eager to make good--more apt to follow detailed instructions to the letter--more appreciative of advancement or increased remuneration--less likely to loaf on the job--more economical with tools and supplies.

I have given you this one man's statement because it illustrates in a concrete way some of the general findings of the Women's Bureau investigations. Our reports stress also the kinds of working conditions and employment policies necessary to promote women's health, safety, efficiency, and morale--in other words how to conserve womanpower. This is particularly important in a wartime economy, when abnormal production peaks must be met, and existing labor shortages overcome.

After inducing women to take war jobs we must build up the defenses to prevent industrial casualties and labor leaks in the form of absenteeism or quits.

Let us look first, at what we might call the keystone in women's employment--the question of fair wages. Wages should be based on occupation, not on sex. A double wage standard--one set of rates for men and a lower set for women is outmoded and should be ruled out everywhere and forever--certainly at this time when the lines between so-called men's and women's jobs have been generally abolished. The underpayment of women who take the place of men called to military duty or more skilled work undermines the morale of the women on the jobs and the morale of the men who expect to return to these jobs after the emergency--and fear pay-cutting of women as a menace to wage standards.

Much progress has been made during recent months in regard to the same standards for women as men. The aircraft industry deserves special mention, with most of the plants having set the same minimum entrance rates for men and women--usually 60 cents. Wage discrimination against women still exists in many places and calls for the cooperative efforts of labor and management to remedy the situation. The Government has set the precedent in the endorsement of the equal-pay policy by the National War Labor Board in several of its decisions. Also you will remember that its General Order No. 16 stipulates that the wages or salaries of women may be equalized with those of men without prior approval by the Board.

The question of working hours is of prime importance. The maximum 8-hour day--the 48-hour week--one day of rest in seven--a meal period of at least 30 minutes in a work shift--these are standards recommended to war plants by 8 Government agencies including the War and Navy Departments--as the best for both men and women--and resulting in the highest output when employees must work under pressure over a long period.

It is realized that war contractors may need to employ women longer hours in special emergencies to meet production schedules. Therefore, most States with a maximum-hour law for women have set up a system of relaxation controlled by the State labor commissioner to meet an employer's need for a limited period.

A much more intensive and extensive program to safeguard the health and safety of women is needed--now that so many new and inexperienced women are coming into industry. Many are coming from population groups not usually employed in industrial jobs--and without an industrial background or habits. These women, at work on new processes or with new substances, need careful education as to where danger lurks and how to protect themselves and to conserve wamonpower.

It is appalling to learn from the National Safety Council how war production was cut last year by that internal foe now known as the 7th column. I refer to carelessness leading to accidents to workers both on and off the job. Thus in our first year of war such accidents caused the death of over 46,000 workers and injuries to 4 million. In the same period announced casualties to our armed forces totaled less than 60,000.

A simple way in which women can help to defeat the 7th column is to wear the right kind of work clothing. A cap of the right kind should be worn if the job requires it, and a woman's hair should be completely covered. Though a girl on a dusty job may wear a bandana, a machine operator should not--for the little ends might catch in the machine. And one of the distressing--and all too frequent accidents to women--is due to hair getting tangled in machinery. This can be prevented by a cap of stiff material, of sufficient height to warn the woman if her head gets too near the machine, and of a generous head size, so the cap will be thrown off if it strikes the moving parts.

As to safe and appropriate work clothing, one of the special bulletins of the Women's Bureau deals with the do's and don'ts. Some of the do's are: Wearing comfortable, durable, suitable clothing--slacks or coveralls for machine work--also sensible low-heeled shoes on all jobs. Some of the don'ts are: Wearing jewelry, opentoed shoes, and run-down heels. Many satisfactory types of work clothing have been designed to enable women to be attractively as well as safely dressed while on the job.

Other special Bureau reports discuss such questions relating to women's health as: Occupational diseases, lifting of weights, proper posture at work, night work and rotation of shifts, maternity care, and so on. Every plant for the sake of safeguarding women's health and increasing their efficiency should establish the right kind of working conditions. It is imperative to have adequate first-aid, rest-room, washing, and toilet facilities. For the benefit of employers who in the past may have encountered difficulties securing the necessary materials for such equipment, I can point out that the War Production Board last month stated that materials would be available for these purposes.

A very important factor--in these days when the value of proper nutrition to both fighters and workers is so much to the fore--is that of eating facilities in the plant. Women should be given opportunity to eat hot nourishing food, away from the workroom. Such provisions help materially to counteract the effects on fatigue.

Today, women workers as well as their employers need to rally their forces against another internal foe--absenteeism--that is causing a serious leakage in labor and a curtailment in output. In trying to solve the problem it is necessary to distinguish between the involuntary causes--those beyond the workers' control--and the casual and the deliberate abxences from work.

The major cause of involuntary absence is sickness--women's rate on this score seeming to be somewhat higher than men's. Women who are more susceptible to fatigue may for this reason take time off from continuous work in munitions plants to get some needed rest. This precaution may ward off serious illness. Brief rest periods in the plant are a practice followed by some firms for both men and women as a preventive of undue fatigue. Certainly women's home responsibilities are a definite cause of absenteeism. The duties of many wage-earning homemakers include marketing, cooking, care of children and sick members of the family, housecleaning, laundry, shopping. Other contributory factors to women's absences from work are make-shift housing arrangements, crowded and insanitary living conditions.

From the viewpoint of women workers much can be done both by means of plant practices and by community cooperation to reduce absenteeism. In connection with the job, well-qualified women supervisors and special union effortx are readily usable measures that help to bring good results. The management can arrange, through staggering of hours or provision of a mobile utility force in some instances, to expedite women's marketing. The community can help materially in this respect, by sufficient changes and staggering of business hours--to give women sufficient opportunity in the evening--both to shop and to have access to the services of dentists, doctors, lawyers, ration boards. Community kitchens can also be set up to prepare meals for working housewives to take home to the family, thus conserving the woman's energy and preserving the family custom of eating at home. Much has been said about provision of nursery schools and other means for the proper day care of children of working mothers. But much more remains to be done in many communities to meet this growing need.

I think we all agree that proper use of woman labor in line with war demands is a complicated business, but we can set up this formula as a guide: (1) Locating and recruiting the essential womanpower; (2) placing it where it can be most effective; (3) developing it adequately to meet the particular needs in each case; (4) conserving it carefully to prevent leaks and waste.

When machines wear out, new ones can be made. But there is a limit to the supply of workers, especially in wartime. Those countries that have been fighting for 3 and a half years have reached a labor crisis. I believe we can avoid that difficulty here if we use our human resources wisely. This calls for cooperation of all groups--industry, labor, the Government, and the general public. Such cooperation is highly essential both on the community and on the national level. And cooperation between the Federal Government and local forces is equally imperative.

Federal agencies these days--with their decentralization methods--are better able to understand regional needs and to lend a helping hand. In closing I wish to say that the Women's Bureau, through our representative in your area as well as our Washington staff, stands ready to cooperate with all interests in Oklahoma that would like to turn to us with questions about women workers. We are all striving for the same great objective--to rally our forces and to use resources to achieve victory as soon as possible--and to preserve and shape our democracy so that it will guarantee to all our people the opportunity and security we believe to be our inalienable rights as American citizens.

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You may keep
See p. 8

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

WOMEN AND MINORS IN INDUSTRY

A Talk by Mary Anderson, Director of the Women's Bureau, U. S. Department of Labor at the Institute of Labor, Sponsored by the Massachusetts Federation of Labor, Campion Hall, North Andover, Massachusetts, Saturday 11 a.m.,June 26,1943.

I appreciate your invitation to confer with you today on women and minors in industry. I am always glad to learn at first hand what labor groups in different sections are thinking and saying -- what stand they are taking on current trends in this grave crisis -- what goals they are setting up as postwar objectives.

The past three years have revolutionized our industrial system, our labor force, our whole economy in fact. We know that American workers have have risen superbly to the emergency. We can all be proud of the great volumes of war materials rolling daily from assembly lines to the war fronts in all parts of the globe. All this has been done despite the striking change in the content of our labor force, caused by the steady siphoning of manpower into combat service. Women and minors have had to be recruited to step into the gaps.

We can rejoice that our women, no less today than in the time of the Pilgrim Fathers and the American Revolution, -- in the years of the covered wagon and the first World War -- work and win side by side with their brothers. But we deplore the turning back of the clock and the letting down of the bars in the matter of child labor. There may be some justification in wartime in areas with acute labor shortages for more extensive full-time and part-time employment of school youth than in normal times. But the most important duty of these young people today is to obtain the education and training that will fit them to meet the demands of highly technical warfare and the difficult problems that will face them in the postwar period. Thus there should be full use of other sources of labor to relieve undue pressure on the younger group, which has even now been drawn on too deeply and with far too little care, the U. S. Children's Bureau points out.

In 1940, according to rough estimates, about a million of our boys and girls, 14 through 17 years of age, were doing full or part time work. In May 1943 there were two million or more, and last summer when vacation work was at its height, three million. The mounting numbers of certificates issued to children of these ages entering employment tell a similar story — more than twice as many in 1941 as in 1940, a 77 percent additional increase in 1942, and a continuing upward climb in 1943. While high school enrollments are decreasing with the thousands leaving their classes to enter the labor market, additional thousands attending school are undertaking part-time work, some for a full 7-or-8-hour shift.

Massachusetts has been no exception to this trend. In 14 of its cities nearly 12,000 certificates were issued to 16-and-17-year old minors in the first three months of 1943, almost as many as in the whole year 1940. Though under the Massachusetts law comparatively few 14-and-15-year old children can leave school for work, even this number increasdd materially in the 14 citieis.

Wherever minors are employed, their services should be used in such a way that their health and welfare will be safeguarded. Many youths now are taking over jobs formerly held by more mature persons. The new workers, being younger and inexperienced, are more susceptible to accident and industrial poisons. Sometimes they are exposed to unwholesome influences. Illegal employment is on the increase in some States, resulting in work of even young children for too long hours, at night, and in hazardous jobs.

The State and Federal child-labor legal standards are under severe pressure, and in some States legislatures have passed weakening bills. In Massachusetts, though there were some attempts to undercut child-labor standards, fortunately, none, according to our most recent information, was successful. The power of labor organizations should support the Governor and the labor department in its policy under the war emergency act — of maintaining the existing standards for minors under 18 — standards of which Massachusetts labor groups may well be proud.

The new position of women in industry arising out of this emergency is another story. We can feel satisfaction at women's remarkable achievements, but at the same time we must give careful consideration to their problems. Many women must carry on two jobs — homemaking and wage-earning. Thus certain questions become more acute as we see increasing numbers of women being drawn into the nation's wage-earning ranks.

Today we have about 16 million women in actual employment — nearly five million more than we had three years ago — though let me remind you that in June 1940 there were 2-1/2 million women unemployed and seeking in vain for work. We still have 400,000 unemployed women. Some of these may be unemployable, while others are in regions with a labor surplus but can not be easily transferred to other sections.

You may ask as so many people do: How many of the 16 million women workers of today are doing war work? My answer is — practically all. It takes many kinds of endeavor both in the combat areas and on the home front to win a war. Thus the woman who sticks to her loom in a textile mill or her machine in a shoe or a garment factory is a war worker as well as the woman who takes a man's place as a welder in a shipyard or as a lathe operator in a tank assembly plant. Equally essential is the woman teacher, waitress, cannery or laundry worker, for a nation at war must still be kept fed, clothed, and in good running order.

We are told that more and more women must be recruited for essential war and civilian industries as more and more men are drafted for front line action. The pattern of woman employment in the United States varies considerably from region to region. This fact became very obvious to us in the Women's Bureau during the past week as we held a conference in Washington with our field agents called in from different parts of the country. In the acute labor shortage areas on the West Coast the demand for women workers is hard to meet. And they are being put on very unusual and disagreeable jobs. Sections of the Middlewest reveal a more or less similar situation, while in the Southeast, though women are badly needed for shipyard and munitions work, some women are still reluctant about entering industry and some barriers to their employment still linger. In New England where women as machine operators in metal shops and arsenals were no novelty prior to the war, nevertheless the emergency has led to a growing reliance on women labor, and women have willingly taken the place of men on jobs formerly barred to women. You know that in Massachusetts women are playing an increasingly important part in producing many kinds of war materials from shoes to ships, from cartridges to heavy guns.

For example, one of our agents over a year ago visited a shipyard in this area to find out what women might do if and when needed. She was told by the management that none of the occupations were suitable for women. Now there are some thousands of women at work on a variety of jobs in that very yard. Recently the manager of another New England shipyard with an unusually good induction program for women was asked by our agent if he could run his yard with 50 percent women. He replied very graciously — if not quite accurately, "Why, I could run it with 100 percent women."

Though recruitment of women as war workers is an important task, even more vital is the conservation of our women forces already at work on the industrial front. It is therefore highly essential that women be carefully adjusted to their jobs, that they have safe, sanitary working conditions, and satisfactory living conditions. Such factors prevent labor waste in a time of labor shortage. These are questions to which the Women's Bureau is giving its constant attention.

You are well aware of the leading role of organized labor -- both men and women in promoting the effective utilization of women workers, and the protection of their welfare.

It is heartening to know that women have gained a much stronger foothold in unions everywhere in the country. Today over three million women are found in the ranks of organized labor. This total is impressive, but it is also suggestive of a greater victory to be won. Many of the new recruits haven't yet come to realize the value of the union. This is due partly to the varied backgrounds of the newcomers. Before entering industry they may have been housewives, domestics, beauty shop operators, saleswomen, waitresses, office workers, college students, teachers,and so on. Though some may think they do not need what the union has to offer, they will eventually realize that in our present system of mass production with thousands of workers in a single plant -- individuals can not solve their own grievances. They will learn that collective bargaining is a short-cut and time saver for both labor and management.

Women as experienced union members can make valuable contributions. They can help recruit new members and interpret the union program to them. They can help blend the enthusiasm and fresh approach of these new members with the seasoned techniques of the older ones. Experienced women can help to fuse a fraternal spirit between men and women as co-workers and co-unionists.

There are many problems related to the extensive employment of women in the war effort that I would like to discuss if there were time. But I shall stress only two basic matters — hours and wages — which are at the root of many other labor questions.

It is becoming increasingly difficult to hold the line as to the 48-hour maximum week. Here in Massachusetts, which was the cradle of hour legislation for women, you are to be congratulated for not having let hour standards be thrown overboard. To be sure your legislature has just granted authority to the commissioner of labor and industries to suspend legislation limiting or prohibiting the employment of women or minors — in such instances and for such periods of time as he may deem necessary to meet the war emergency. We all know that some relaxation may be needed at times to meet war production schedules. But we also know that great vigilance must be exercised by all forces concerned with the maintenance of standards to keep them from slipping unduly.

I was glad to read the other day of Mr. Moriarty's protest against the employment of women as part-time workers on a 4-hour shift after they had put in a 9-hour day. He declared that this practice contemplated by a war plant would be a violation of the State law.

There is strong reason for the endorsement some months ago by eight Federal Government agencies of such standards as the maximum 48-hour week — one day of rest in seven — and a meal period of at least 30 minutes in a work shift — as the optimum for both men and women at this time. Such standards prevent undue fatigue. They mean greater efficiency and higher output. Longer hours are a very short-sighted policy when men and women must work at high speed under pressure over an extended period. Fatigue leads to accident, illness, absenteeism, and turnover.

Since women become fatigued more quickly than men, the Women's Bureau recommends brief rest periods for women — usually ten minutes in each half of a work shift. Such a measure frequently increases output as much as 10 p rcent. Long hours and undue fatigue are even more serious for women with homemaking duties to perform, especially at this time when the mere mechanics of living have become so consuming of time and energy.

As to what a woman should receive in her pay envelope, let me say that the Women's Bureau since its origin in World War I has always urged that wages be based on occupation and not on sex. And during the time since 1918 — and especially within the past year — many other voices have joined in the chorus calling for women to be paid the same rates as men. In our fight for democracy we can not permit such an unsound undemocratic procedure as underpayment of women who take over the jobs of men called to the front. We can not let unfair pay differentials undermine the wage structure. We can not let a double wage standard undermine the morale of women on these jobs and the morale of the men who expect to return to industry after the war.

Through the efforts of Government and labor unions, and also of management in certain instances progress is being made in regard to the equal pay policy. But our Women's Bureau studies still show many cases of pay discrimination against women. Now the National War Labor Board has declared that adjustments to equalize the wage or salary rates paid to women, with rates paid to men for comparable work, can be made without Board approval under the "Hold-the-line" Executive Order of April 8. Therefore I urge the unions to rally their forces and to carry on the equal-pay campaign to the fullest extent.

The factor of equal pay will be a vital one in the postwar period. Such a nation-wide practice would thwart any tendency to substitute permanently women wage earners as a cheaper form of labor than men in certain types of work

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June 1943

usually regarded as masculine.

One question I am frequently asked is: At the close of the war what is to become of all the women who have been drawn into paid employment? This is a burning question with both men and women and calls for the most careful consideration. Even as we strive to win the war we must draft blue prints of the economic and social structure for winning the peace. One of the steel girders of this structure must be a program of full employment to both men and women who want and need it. I do not mean to imply that all women who have stepped into the breach in the crisis should be retained in the postwar labor force. Certainly I do not mean that women should hold on to jobs at the expense of returning soldiers. What I want to drive in is the needto do special planning directed towards the interests of women who want and need employment. They should not be unfairly accused, as at the close of the last war, of taking jobs from men who are demobilized from the armed forces.

At the close of the conflict, with the curtailment of war industries and the demobilization of the troops, many women will automatically withdraw to their home jobs. But you and I know that at all times in this country millions of women must earn a living -- and many support dependents as well. As a result of the war the wage-earning responsibilities of women will be increased. Many will be forced to take the place as breadwinners of men who do not return or who come back maimed from the battle fields.

Today both the men in military service and the women in industry are acquiring new skills. Some men when demobilized will not want their pre-war jobs but will prefer fields where they can apply their new skills. Also some women who have displayed special ability for occupations new to them might well be retained thereon.

We do not know just what our occupational and industrial patterns will be after the war. But we can envision many possibilities. There will be great need for consumer goods to replenish depleted stocks in all countries. We must have extensive services to heal a strife-torn world. We hear stimulating talk of new industries and developments making for greater progress in many directions than we have ever known. If we try to shape our policies and plans in accordance with the Four Freedoms and the Atlantic Charter then we should guarantee to men and women in search of work opportunity for employment and freedom from want and fear.

Looking to this goal our postwar blue prints must be drafted through the cooperative efforts of labor, industry, and Government. In the Women's Bureau we have already started our research on the postwar problems and solutions for women. Not only do we want the assistance of organized labor in this project but we want women themselves to realize their responsibility and their stake in working out their own salvation in relation to that of mankind in general. And as we make our many adjustments in the transition period from war to peace, let us all remember that women on the industrial fronts have made their contributions and sacrifices too, -- for victory and democracy.

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WAR DEPARTMENT
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September 27, 1943

IMMEDIATE RELEASE

EXCERPTS FROM
REPORT ON "AIR STRATEGY AGAINST JAPAN,"
DELIVERED BY
LIEUTENANT COLONEL FREDERICK S. WILDMAN,
PLANNING ASSISTANT TO THE ASSISTANT CHIEF OF AIR STAFF, A.A.F.,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR AND NEWSPAPER LEADERS,
SEPTEMBER 27, 1943,
WASHINGTON, D. C.

The general concept of defeating Japan from the air is inclined to give too great cognizance to the vastly superior resources which will be at our command after the defeat of Germany--and too little recognition to the strategic and geographic barriers which hinder us from getting at the Japanese mainland to inflict vital damage. Likewise with the impression that our Army, Navy and Air Force can attack Japan from any one of several places, as soon as the necessary strength is assembled; which is far from the truth.

Japan schemed her war carefully and well--strategically, economically and psychologically--and, in doing so, capitalized upon gaining, and fortifying, every obstacle which would delay and perhaps exhaust us--and in particular, in creating defenses aimed to stifle our mounting aerial power.

This strategy was probably well founded--against traditional methods of attack--as our true industrial and military supremacy cannot be brought to bear against Japan itself until after tedious advance.

We are determined not to go along with this kind of warfare, convinced that effective means can be developed to accelerate the employment of our vast aerial supremacy against the Japanese mainland--thereby hastening the advance of all arms.

Japan has organized her basic economy into an inner zone, centering around her island empire, and an outer zone, which stretches out through the conquered areas. Parallel with the German superior race concept, Japan has directed her principal effort towards making this inner zone a self-contained economic realm, holding substantially all of her industry, with the resources of the agrarian outer regions utilized largely for local maintenance, except for those critical imports, such as heavy oil, which Japan requires to round out her industrial economy.

Just as in the air war against Germany, the pattern for an early defeat of Japan is again clearly one of a progressive destruction, from the air, of critical targets in the Japanese industrial, economic, and military systems--selected to eliminate Japan's capacity for effective armed resistance. We must truly destroy Japan's ability to wage war, and, if possible, do it to last through generations to come. Certainly air power is America's most promising weapon to hasten this accomplishment.

The Japs already recognize--and fear, that power--realizing that their great vulnerability is from the air.

Japan has given impressive evidence of a capacity to produce, despite heavy losses, an increasing number of first-class, though decidedly vulnerable, combat aircraft. Because of her interlocking airfields--stretching from Formosa to Burma, Malaya, the Dutch East Indies, and on through New Guinea and

MORE

the Solomons, to the Mandated Islands and the Marshalls--Japan has achieved an aerial mobility which enables her to concentrate even short-range fighter planes speedily at any chosen point, for either offensive or defensive purpose. We lack areas for such overlapping bases, and are therefore required to deploy, in each of several localities, the number of aircraft essential to match the entire Japanese potential. This should evidence the necessity, both of destroying Japan's aircraft production at source, and of a pronounced superiority of planes in the Pacific.

Another objective of our Air Force is the attrition of Japanese shipping, and particularly tankers, already strained under the burden of maintaining the enemy's overstretched lines of supply to her new areas.

During the first year of the war, Japan had us shorthanded, forcing upon us, first the necessity of parrying her blows, thereby limiting our offensive operations to strategy of the moment. In those touch-and-go days, the Army Air Forces gave evidence of their capacity to undertake either a defensive or offensive role, as necessity or opportunity made advisable. This phase has now passed. With strongly reinforced air and other forces we now hold the initiative ourselves and can strike at the times and places of our own choosing. While our current efforts may have caused Japan great mental discomfort, we have still not caused her any vital injury---and, in the interim, she has possessed valuable time to consolidate her defenses and fortify her economy. With the defeat of Germany, our resources will be multiplied, but we will still remain 1,000 to 3,000 miles from bases which permit the conduct of sustained bombing operations against the essential Japanese objectives.

The most favorable bases from which such operations might be launched lie in China, Russia, the Kuriles and Aleutians, and the outlying islands of the Pacific.

Too often the task of aiding China is over-simplified as largely a problem of driving the Japs out of Burma and reopening communications over the Burma Road. This is but a small fraction of the job, which entails not only the problem of re-conquering unfavorable terrain, such as Burma, but, more pointedly, one of overcoming the limitations of supply, caused by this terrain and the meager facilities of the country which surrounds it.

Our problem in this area is really four-fold:

One---to bring relief to China to sustain her as an ally.

Two---to mount and supply overland operations to reconquer Burma.

Three---to transport into the area the vast quantities of material needed to augment primitive communication facilities and construct heavy bomber airfields.

Four---to provide the flow of supplies necessary to support an offensive.

Well before such operations can commence, bases for our largest aircraft, carrying maximum loads, must be constructed, which means bulldozers, steel mats, and engineering supervision. Security of the area must be provided. Because of its inaccessibility, every bit of this material must reach China by air today, over the most treacherous flying country in the world. A large part of it must come by air, because of the limited transportation and harbor facilities.

An approach to Japan from the New Guinea or Dutch East Indies areas to the south is fraught with the time-consuming task of reducing island jungle fortresses, stretching end on end over 2,500 miles, before an effective air base zone can be reached.

When we look to the Central Pacific, we find that Japan has developed the countless atolls of the Gilberts, Marshalls, Carolines and Marianas, into mutually supporting, unsinkable, aircraft carriers, each of which must be reduced or neutralized on such a line of advance.

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Even through the utilization of the great allied air forces, which will be on hand after the defeat of Germany, to accelerate our advance by hurdling intermediate islands, progress from either the south or Central Pacific will be painfully slow as the Japs must literally be dug or blasted out of each island reached. Air bases and aircraft maintenance facilities, antiaircraft and other defenses must be developed, as well as an assured line of supply maintained, necessitating the reduction of intervening enemy strong points. This network of islands has provided Japan with an outpost barrier which they boast will take us years to penetrate.

Many people point to the Aleutian and Kurile Islands as effective bases for the essential bombing of critical Japanese targets. Local weather conditions place a heavy restriction upon sustained operations from these areas, and the bombing of Germany has given ample evidence that sustained operations are necessary. The volcanic terrain further limits the suitability of these islands as efficient bases for major operations. Additionally, Japanese fighter defense forces and aircraft warning systems could be most effectively employed against us on an approach over the long chain of the Kuriles.

It is inconceivable that Japan has not given cognizance to the security of her northern approaches, equal to the attention devoted to those from the south, east, and west. Railroad communications from the west into the Russian Maritime Provinces parallel the Japanese Manchurian front for several hundred miles, along which Japan is reliably reported to have massed her troops.

Certainly material advantage would result from the possession of bases on the Kamchatka Peninsula if we could develop and protect them. However, weather conditions in this area obstruct operations as does the distance of roughly 1,700 miles from the central target area of Kobe.

Other hopeful strategists conceive of a vast aircraft carrier armada arrayed off Japan from which repeated bombing operations might be launched. While carriers are invaluable offensive weapons, we must recognize their problems of supply, and particularly their vulnerability to landbased aircraft.

This certainly presents a formidable gauntlet of obstacles to hinder our getting at Japan. Suffice it to say no one is permitting themselves the luxury of succumbing to them, but rather, all are determined to become masters of them.

Our air leaders conceive of hastening the seizure of essential advance bases, through operations from the air--and of maintaining our forces in them by a hitherto unparalleled use of aerial transport planes. As our air forces drive back the enemy's air battle line, our ground and naval forces can move forward on the surface battle lines.

Such strategic bombing must be heavy in weight, consistent in effort, and condensed in time, as thinly spread attack would not achieve the cumulative undermining of the Japanese capacity to wage war.

Coordinated effort by each service is an essential--with an air man running the air war, a soldier the ground war, and a sailor the naval war--all integrated into a cohesive team as in Europe, concentrating upon the same goal--the earliest possible defeat of Japan.

This is our single strategy in present planning.

The accomplishment of it imposes a challenge to the production front equal to that of the air front. New model planes must be developed, existing types altered, and special equipment designed, and produced, to meet the particular needs of an accelerated campaign against Japan, quite different in character from the war against Germany. While it is essential to maintain present qualitative superiority, great numerical superiority is even more essential. Not only does Japan's inner mobile position make this mandatory for combat types, but the problem of supply--the very kernel of our task--will require every heavy bomber type aircraft we can produce--to serve as combination combat transports--if we are to shorten this war.

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The extent of the problem can be better appreciated by considering our air war against Germany, where we have possessed, in Great Britain, an ideal base for operations—300 miles from Germany proper. More pointedly, the problem of supplying Great Britain, with its concentrated, logistic facilities only a week's haul from our eastern seaboard is insignificant in comparison with the logistic problems posed in the primitive Asiatic and Pacific areas. Industry's share in this task is a mighty one.

We have numerous strategic plans in process, all being subjected to critical spotlight scrutiny. Each will require gigantic effort, great faith in our Air Forces, and bold leadership—all of which are being concentrated upon this job.

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September 27, 1943

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EXCERPTS FROM
REPORT ON "SUPPLY BY AIR",
DELIVERED BY
COLONEL EMMETT O'DONNELL, AIR CORPS,
ADVISORY COUNCIL, HEADQUARTERS, ARMY AIR FORCES,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR AND NEWSPAPER LEADERS,
SEPTEMBER 27, 1943,
WASHINGTON, D. C.

The modern airplane is a thing of wonder—make no mistake about that. However, as with all highly successful developments, the tendency has been to regard it as a cure-all and to ignore its limitations. The true worth of air power cannot be realized unless we are fully aware of these limitations.

I am speaking specifically, of supply by air. The public has been told that so many million tons have been delivered by the Air Transport Command in such a period of time, that tanks and artillery can be flown, that the established air routes cover many thousands of miles. Naturally, the public has been impressed—but it has led to the false assumption that the problem of supply, or logistics, can be solved by air alone.

My experience in the first 16 months of this war has been in the Asiatic theater—mainly in the Philippines, Australia, Java, and finally China and India. In that time, one fact above all others has been impressed upon me: Sea and overland communications are still the basic routes of supply, and air transport is only a supplement to them.

The modern army that depends purely on air for its supplies in a major operation is courting defeat. The German forces trapped at Stalingrad found that out.

The great value of air transport lies in its ability to deliver emergency personnel and cargoes, and to reach places that are inaccessible by other means. The established airlines of the Air Transport Command are over 112,000 miles—a tremendous distance, and it does not lessen its importance in the least to say that it is inadequate as the sole supply factor in any major military operation. The truck-railroad and ship combination remains the bulwark upon which the logistics of our big campaigns must be based.

Both the importance and the inadequacy of airborne supplies can be shown in the relentless struggle over the past 18 months to fly supplies into the Orient.

It is true that every week our air carriers are delivering quantities of freight which, a few years ago, would have seemed the sheerest fancy. However, when we consider the requirements for that theater we realize that it is little more than a trickle.

Those requirements include the necessity of keeping both the Chinese and the American Air Forces in constant operation; they include the creation of many new bases; they include equipment for the Chinese.

As an example, closer to home—to get 100,000 long tons monthly from San Francisco to Australia by boat calls for 44 ships, 3,200 men in crews and 165,000 barrels of fuel. To do the same job by air in four-engine transports

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calls for 10,022 planes, 120,765 flight crews, 8,996,614 barrels of gasoline and 85 large-size tankers to carry the gas. As you see, dreams of air supply for major operations must remain dreams.

Here is another illustration of the problem in the delivery of gasoline for combat purposes. A heavy bombardment group operating in the Orient has had to ferry in its own supplies. By that I mean that the same crews and the same B-24 Liberators that are used in combat, have to ferry their own gasoline, bombs and other materiel indispensable to the performance of these missions. It is not farfetched to compare it to someone who sends a telegram and then runs out to deliver it.

That is not a stunt and we don't enjoy doing it. It just happens to be the only way in which that group can be supplied for its essential, minimum operations against the enemy. Until such time as roads can be constructed and seaports become available, this same procedure must be followed whether it be 50 or for 5,000 aircraft.

Let me tell you briefly the story of our growing pains in India. To begin with, upon our arrival from Java in March of 1942, we found a grand total of ten airdromes in the entire country. Not one of them was located in the area from which it was apparent we had to operate. Jointly with the British, we hurriedly decided upon a construction plan which called for the building of additional airdromes.

Until that time, the British defense of India had been based on the assumption that the only threat could come from the Northwest frontier—the Kyber Pass area. Transportation facilities, military warehouses and depots had consequently been created in direct support of that area and there was no system of military air operations whatsoever. The Japanese occupation of Burma suddenly brought the realization that the Indian Army had to cope with a threatened attack not from the Northwest, but from its Eastern borders.

The complete and rapid readjustment of defenses that therefore became necessary would have been a large task in any country—let alone India. Here, the enervating heat, the natural apathy of the population and the total absence of modern methods and equipment made it a gigantic task. It is a country where even a train ride across the land becomes a major undertaking.

Assam is separated from the rest of India by the Brahmaputra, one of the longest rivers in the world and one that hasn't a single bridge over it throughout its length in that country. Its mean level varies 25 feet between the season of full monsoon and the dry season, thus putting riverside ports out of operation.

There is no through-road between Assam and Calcutta. Rail transportation is complicated by changes in gauge and the necessity for utilizing train ferries. At the time, the capacity of the inland water system was even lower because power units and barges had been moved to Iraq. The rail and river systems combined, are hardly adequate to maintain any sizeable military effort through Assam. During the monsoon season, nearly all transportation other than by river ceases since the entire area becomes inundated.

The monsoon season lasts, in Assam, from mid-May until mid-November. The average rainfall is about 150 inches as compared to a 20-inch average for a similar period in, let us say, Virginia. Malaria is likewise a constant threat.

Life is cheap in India and Labor uses no modern devices whatsoever. Sections of the land were cleared for our airdromes and runways were painfully built with rocks taken from the river bottom and carried to the desired locations in baskets, on the heads of coolies. Antediluvian stone rollers, motivated by human labor, packed down the rock. The riverbed, incidentally, is the only source for stone or rock in this area.

The government had no control over the coolies and they would frequently pick up their few belongings and simply leave. There were several reasons for this: Anti-British propaganda, a cholera scare, the shortage of loose change

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which was being hoarded as a counter-government move, or actual raids by Japanese bombers which killed many and frightened still more.

Those are the conditions under which we finally erected the airdromes and started the freight moving. The actual flying operations are no less difficult and those pilots deserve as much credit as any in actual combat. Weather is terrible. 17,000-foot mountains have to be cleared by instrument flying; if they veer to the north they encounter 22,000-foot peaks and if they take a southerly route they are over enemy-occupied Burma. Icy conditions prevail at the altitudes in which they are forced to fly and a crash-landing along that route is virtual guarantee that the crew will never be seen again.

Once transport operations began in earnest, the Japanese reaction was swift. Our Assam fields were raided in strength from their Burmese bases. Our fighters, however, made these enemy forays so costly that they now visit us only rarely. The secret of our fighter success lay in an air warning reporting system.

It was necessary to rely on a visual system of air warning. A number of these air warning teams, equipped with radio, were consequently set up. Upon observing the approach of the Japs, their radio notification permitted our fighters to get off in time for interception. These warning teams, each composed of ten men, are supplied by air as it requires two or three weeks with the aid of porters to reach some of them.

A few words on the inhabitants may give better insight to the problems in creating and operating this warning system. They are a head-hunting people, ruled by a king. They resent the infiltration of the white man, but as long as they understand that the presence of the white man is only temporary, they appear satisfied to cooperate.

They expect to be paid in silver for the use of their land and services. Tribal warfare is a favorite pastime. They fear above all else molestation of their women. They have no concept or concern with our war with Japan.

The natural aptitude of the American soldier and his friendly democratic manner towards the natives have gained their trust. This has played an essential part in the success of our air warning system.

Air supply has made possible the activities of General Chennault's Fourteenth Air Force, but air supply, we must remember, is tied to ground supply. Those 13,000 miles to India from this country, over which our heavy equipment and ground personnel must travel, has acted as a constant drag on all our plans.

The more we study a problem of this sort, the more we realize that war—like charity—begins at home.

END

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September 27, 1943

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EXCERPTS FROM
REPORT ON "AIR BASES,"
DELIVERED BY
LIEUTENANT COLONEL WILLIAM G. HIPPS, G.S.C.,
OPERATIONS DIVISION, GENERAL STAFF,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR AND NEWSPAPER LEADERS,
SEPTEMBER 27, 1943,
WASHINGTON, D. C.

What I have to say in the following minutes can be summed up in three words: It's not easy.

The strategic problems and the tactical difficulties that face us in the conquest of Japan are as many as they are varied. Let us consider just one phase of it—the matter of securing airdromes in the New Guinea area with which I happen to be acquainted.

The primary objective of every offensive operation in the Pacific has, till now, been the occupation of enemy-held airdromes or airdrome sites. Control the airdromes, and you control the area. This was the reason for the Buna operation during which Australian and American troops had to fight their way over the Owen-Stanley mountain range.

When I say that our troops were trying to get from this point to that one, it seems a simple matter. Maps don't show the thickness of jungles, the treachery of swamplands, the Jap snipers, or the mosquitoes that bear malaria. Actually, the crossing of these mountains was a tremendous job of organization. The only dependable way our ground forces could be supplied was by dropping the goods from our air transports. It was expensive, but necessary.

This struggled for landing fields brings to mind an interesting story. We had, in the Southwest Pacific, an engineer by the name of Sverdrup who, as a civilian, built most of the airdromes in that area. He was given a Colonel's commission in the United States Army and one order. The order was to get out and build more airdromes.

Using an Australian as guide and a long string of carriers, Colonel Sverdrup headed into the New Guinea jungles like Frank Buck. He followed native trails roughly along this route, stopping every once in awhile when he found a likely looking site. Then he would build an intermediate airdrome. As it neared completion, he moved on in search of another site. He kept in touch with us by radio and every few days I'd fly out to see how he was getting along and to drop him supplies.

His trail extended east of Port Moresby and most of his homemade airdromes were serviceable, but two were not. When choosing the site of an airdrome, it is difficult to judge the effect that rain will have on it. On one occasion Colonel Sverdrup signalled to us that a site would be ready on a certain date. Another officer and myself decided to try it out with an empty C-47 Transport before using a loaded one. We flew over the new airdrome, scattering workers who were still filling in the low spots with pebbles, and landed. We found ourselves sinking into soft ground from 4 to 6 inches for the entire length of the runway. We finally left, having accomplished the first and last landing at that airdrome. Not all the sites were like that, but it is indicative of the sort of problem we faced.

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Normally, it is safest and therefore wisest to have landing fields a few miles behind the front lines--but not in New Guinea. Our fields had to be as near as possible to the front lines as a few miles in that sort of terrain can easily mean a day's journey. Day after day, within firing range of the enemy, native and soldier labor cleared the high kunai grass and prepared landing strips on savannahs or meadows. After each job was completed, troops and supplies moved in by air. Then the front line changed, and with it new air fields had to be cleared. It was a continuous, back-breaking process. Transport by ship was extremely limited because of the uncertainty of air cover and the lack of small shipping.

Air transport was the only answer to a dependable and sure means of supply during the Buna campaign. We have just completed an offensive to take Lae at the mouth of the Markham River. Because of the Owen-Stanley Mountains, this offensive was beyond effective fighter range of Port Moresby, and airfields, sufficient to take care of enemy opposition, had to be constructed. This amounted to three strips.

By aerial photographs, the site of such an air field was chosen, and a party of Australian soldiers and American engineers hiked overland to this spot. They set about to accomplish the preliminary clearing to permit our transports to land. After this job was done, the C-47s ferried in an airborne aviation engineer battalion. In addition to the engineer battalion, an airborne antiaircraft unit had to be transported in for protection, as the field was being built within uncomfortably close range of the Jap aircraft at Lae.

The first engineer company landed on July 10th, and by August 14th it was completely established and ready for operations. In a period of a little over a month, the engineers built all the necessary dispersal and camp areas and the airdrome. During that time, the air transports were kept busy bringing in all normal supplies and, in addition, a necessary minimum gasoline reserve.

The expenditure of all that effort, however, was warranted. The project paid for itself in one mission. It was the staging area utilized by the fighters in their devastating attacks during which many scores of Jap aircraft were destroyed in the air and on the ground. It was further used as the base from which our fighter craft protected our advancing ground troops in some of their attacks. To provide the air coverage of one fighter group based here, three groups or more would have been necessary had they been based on Buna or Port Moresby. Fighters operating from Port Moresby would have spent 1½ hours in travel and only one-half hour over the target; those out of this jungle base used only 30 minutes of their precious gas in travel and two hours over the target. The cold logic of gasoline consumption can neither be avoided nor ignored.

Now that Lae has been captured, this base will no longer be of any use. New airdromes will have to be erected. This jungle airdrome was built in record time for such conditions, and it served its purpose. However, we cannot escape the fact that over a month was required to construct the airdrome, and that hundreds of such airdromes will be needed before we are in sight of victory.

These conditions hold true for operations throughout the Southwest Pacific. Roads or communications are non-existent. They must be built or, if captured from the Japanese, they must be rebuilt. As is happening at Lae, engineers are flown in. They put airdromes into serviceable condition and repair old docks or construct new ones so that supplies can be brought in by the more economical means of water transportation. After docks have been built, come more engineers with heavier equipment to accelerate the work of the airborne engineers. Always, you will notice, it is the struggle to get supplies and more supplies. The history of the fighting in the Pacific can be written in terms of Logistics.

The building of each airdrome in the South and Southwest Pacific presents its own especial problem, but the type of ground usually falls into

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three classifications. There is the coral atoll, which is relatively simple to build into an airfield—provided it is the type that can be packed. It is a matter of leveling the coral surface and rolling it to get the necessary hardness. This is work that has to be done not only for the entire length of a runway, but, in addition, a greater amount for the dispersal bays and lanes.

Secondly, there is the black loam which is one or perhaps two feet above water level. Here no amount of rolling can make the base soil solid enough to support heavy bombers. The same is true of the third type, which has a thin topsoil of covering sand. Permanent surfacing becomes necessary. For this purpose we use metal strips.

To build a complete, effective base, capable of handling modern aircraft, there will be needed several thousand tons of metal stripping for runways alone.

In the Far East, as elsewhere, this is a war for bases—air bases. The rapidity of the reoccupation of New Guinea and similar areas will be governed by the speed with which we can construct such bases.

After every offensive we must build our air strips and stock them for the next phase of action. Large quantities of equipment and supplies must be immediately available to set up the new fields. If we don't get them, we don't move forward. Consequently, we in the Army are depending on industry to keep these supplies flowing so that we can get at the Japanese jugular vein as soon as possible.

As I said in my opening remark: It's not easy.

END

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September 27, 1943

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EXCERPTS FROM REPORT ON
"AIRPLANE PRODUCTION"
DELIVERED BY
BRIGADIER GENERAL B. W. CHIDLAW,
CHIEF, MATERIEL DIVISION, ARMY AIR FORCES,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR AND NEWSPAPER LEADERS,
SEPTEMBER 27, 1943,
WASHINGTON, D. C.

As most of you know, our Commander-in-Chief has set as a goal a production rate of 10,000 airplanes a month. Last month we produced between 7,600 and 7,700. This month, a shorter month, getting the production breaks, we should better that mark.

Now let's stop a minute and take a look! Does this mean that in five or six more months, say by late spring of '44, we will be out of the production woods? Not by a long shot--and I'll tell you why.

First of all we have solved most of the easy problems--and admittedly some not so easy. Plenty of tough ones, however, are left.

Many of the airplanes now on schedule are bigger airplanes--faster airplanes--more complex airplanes--and hence more difficult to build. More material is involved. More man-hours are required. We know that! What are we going to do about it? Well, we're going ahead and build them or bust a hamestring trying.

I know all of you are more or less burdened with problems, just as we are, and that there is no easy solution to any of them. But some organizations are finding these solutions more successfully than others. It would seem like a simple thing for us to see what the other fellow is doing and to find out how he does it. We are all in this war together. So let's forget our pride. Let's go over to our neighbor's plant and see how he does it. He'll be glad to show us.

It recently came to my attention that a certain operation in one plant required 14 man-hours. In another plant, the same operation on an identical piece of equipment was taking nearly 200 man-hours. We hopped right on this problem and a careful time study indicated that the job, properly done, should require some 38 to 40 man-hours. This meant only one thing--that the first fellow was doing it in a hit-or-miss fashion, not doing it well, and consequently jeopardizing lives and equipment; while the second chap was overdoing it, wasting valuable man-hours and materials, which was unnecessary.

You might well ask why such things aren't picked up sooner in the game. I can only reply that with approximately 2,000,000 people now at work in this aircraft industry, and with the spreading thin of our key men and trained inspection personnel, it becomes the personal responsibility--and I repeat those words "PERSONAL RESPONSIBILITY"--of each of us and of each and every one of our people to see that proper standards are maintained. Inspectors to inspect the inspectors isn't the sort of answer we want. The real answer again lies in the workman himself, and in his pride of workmanship which is, in turn, established and fostered by the organization itself.

I think we can say that the main production problem of the Air Force is the delivery of airplanes on time. Every once in a while you see newspaper accounts of how we set our schedules sky high so as to keep you humping. But these are not targets; they are working schedules. Let me tell you that in the Air Force, we carefully revise our airplane schedules in the light of current conditions and then at the beginning of each month, we estimate what we will actually get in the next 30 days. Well, I ran through those production schedules at random the other day and here is how we made a final revision after our previous rescheduling:

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"A" plant down 20 planes; "B" plant plus 10; "C" minus 7; "D" minus 8; "E" minus 10; and so on down the "J" minus 100; "L" minus 60; "M" minus 100, and so on. In that random sample of just a few plants, there was a net loss of 389 planes that we had counted on which we weren't getting. I'm not blaming anyone in particular for that picture, for I know there are a great many factors in it beyond anyone's control. All I'm saying is we aren't getting the planes we expected.

All right, as of today the AAF are scheduling many tactical type aircraft for delivery in the next 12 months. That means combat stuff, in addition to training aircraft. Well, we've got those planes allocated already for the various theaters and crews are being trained to man them. We've promised some theater commander that he will have so many groups delivered at his doorstep by, say, March 17. And he has told us he needs more, but he will try to squeeze by with those on the offensive operation he has planned. Then comes March 17, and we don't have the planes. Well, what's the answer? Allocate them from some other theater? Dig into reserves? Reserves aren't set up to meet lagging production schedules; in fact, if you don't have production you don't have reserves.

Now, some comment on the many modifications and changes which we force you to make. Our modifications are of two types: To meet climatic conditions and to meet the enemy. From a purely production standpoint, I realize they are a tremendous factor in throwing the proverbial monkey wrench into the machinery. My office and the Materiel Command are frequently in the position of hammering on the table with our left hand demanding that the manufacturer get out X-hundreds of airplanes this month--or else! And with the right hand getting ready to throw you a curve ball right over the outside corner, by calling for a modification or design change dictated by combat experience.

Probably no industry faces the rapid changes in design that are essential in the aircraft business.

At one phase in our operations we had to figure on the use of non-strategic materials. We designed several types of aircraft to use that material and started them into production. As we began to see daylight on our material's problem--and as testing further proved to us that there was no substitute for the very best in aircraft manufacture--we underwent a serious cancellation in wood types. Those that just weren't paying their freight had to go.

Now we have in process a new development which will tremendously increase the firepower on certain combat aircraft. I'm not going into detail on this except to say that it is of the highest military strategic importance to get this job done. The point I wish to make is that although it has caused widespread changes in the design and manufacturing procedure of these airplane types, we simply _must_ get these planes to the fighting fronts at an early date without seriously disrupting our present production schedule.

In the same way we make minor changes. We find that the FW-190 could come in from a certain angle and knock down our B-17s and B-24s. Well, you can bet your hat we did something about that. So we got busy and developed a new turret for the nose with a wider angle of fire. Then we issued change orders and handed our prime contractors the new headache of getting a new turret into the production lines _without_ the delay of even one day in the delivery of scheduled airplanes. That's tough. But our strategic plans won't wait for the airplanes and we will be damned if we are going to let any of our boys get shot down just because changes of equipment present a few headaches.

You will agree, I know, that warfare is never static and neither are the weapons of war. We intend that our equipment be not one jump, not two jumps, but _many jumps_ ahead of that of the enemy, and all equipment changes, necessitated by the ever-changing tactics and tactical situations, must be accelerated into the line. You must accept this fact as indisputable and work that much harder to achieve not only the quantitative but the qualitative goals we have set.

I would like to leave one further thought with you. General Ira Eaker's Eighth Air Force Bomber Command have been knocking down Jerries at the approximate rate of about six to one for every one of our own heavy bombers lost in the air. At first glance that seems very much on the credit side of the ledger. But if we

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are getting six to one, then a logical deduction would be that it is the seventh Focke-Wulf 190 or Messerschmitt which gets us. This all adds up to the fact that the one more bomber which you turned out last month which gets through to its objective whether it be an aircraft factory--an engine plant--a blast furnace--a power station--is doing that much more to insure that the seventh enemy fighter never gets into the air; or that extra fighter which you were able to turn out late one Sunday afternoon which knocked down that seventh German airplane means one thing. It means that ten young American lads are going to return from tomorrow's raid, who otherwise wouldn't have come back.

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EXCERPTS FROM ADDRESS BY
LIEUTENANT GENERAL JOSEPH T. McNARNEY,
DEPUTY CHIEF OF STAFF, U. S. ARMY,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR AND NEWSPAPER LEADERS,
SEPTEMBER 27, 1943,
WASHINGTON, D. C.

I. INTRODUCTION

It is with genuine pleasure that I find myself privileged to add my own welcome to you today. To me your presence here is a symbol of the close and essential partnership that must exist between the American Army and American industry. Your performance has provided our troops with the best weapons and equipment in the world. Our fighting men confidently expect you to surpass your present good work by improving both the quality and the quantity of your output. That is going to be an increasingly tough assignment.

I know that you are well aware of the magnitude of your production responsibility. To aid you in instilling that feeling to all your associates I want to describe in general terms some of the strategical difficulties and principles which have influenced our past military efforts and which will play an important part in determining our future operations.

There is one admission which I must make at the very outset. I cannot talk in detail about our future military plans. This may be a disappointment to some of you, but I am sure you will understand the military necessity for restricting information concerning future operations to the minimum number of individuals and to divulge to those individuals only so much and only such parts as may be necessary for them to carry out their assigned tasks. Any other policy contributes to the loose talk which may enable the enemy to call the plays in advance and to dispose his forces accordingly.

II. IMPLICATIONS OF GLOBAL WAR

To picture properly the truly vast panorama of the global war in which we are engaged I should like to review briefly some of the salient features of our military operations to date. In the initial deployment of our troops, I want to emphasize that not only were we forced to dispose our forces all over the world, but in addition we had to scatter them initially in a "plug the line" effort that further dissipated what was already an over-extended deployment.

Today the picture has changed and we have shifted to the offensive.

It is not enough to agree that our troops are scattered all over the world. You will miss the significance of our global warfare if you do not stop to contemplate and comprehend the time and space factors involved. Our lines of communications circle the earth and extend over 56,000 miles. These time and space factors have exercised a decisive influence on our global strategy. For instance, the round trip to the Southwest Pacific is roughly twice that involved to Europe or North Africa. This has been one of the major determinants of our strategical plans.

These vast ocean spaces have made shipping one of the major headaches. I would say that the shipping and anti-submarine fight was our first great battle. The victory which we have achieved here has not been melodramatic, but its consequences have been more far-reaching than perhaps any action to date. Our ship building program has been magnificent, and our anti-submarine campaign has reached a point of effectiveness where shipping losses have been very materially reduced. The fact remains, however, that available tonnage has and will continue to constitute one of the most difficult problems which we have to face. Almost every phase

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of the war to date has begun by an amphibious operation. This is the most difficult of all types of military action. To be successful it requires a greater preponderance of strength. Air supremacy is essential. Our ability to assemble the special type of landing craft which we have developed has largely determined when and where we could launch a campaign.

This global war has created for the United States special problems in the disposition of our forces and in levels of supply and extent of reserves. We must have on the ground in the area where the operation is to be launched adequate troops and supplies for the job. Determining what is ample and what constitues a reasonable factor of safety has been and will continue to be a most difficult problem. Every commander is naturally conscious of the magnitude of the task before him. Each would like to have all of the means that he can get his hands on. All feel that having been given an assigned mission they should receive the means which they deem necessary to do the job. Unfortunately, the sum total requested is usually in excess of what is available. Our problems would be greatly simplified had we but one area into which we could pour our every effort. As it is now, our decisions are such that very often they please none of our overseas commanders. Our far-flung battle lines and the critical shortage of shipping have made it difficult, if not impossible, to shift supplies and troops from one area to another. Excess stocks in one far-flung area cannot readily be transported great distances to supply a deficiency in another area. Our pattern of global warfare has necessitated a system of bases and overhead installations which are not as economical as we would like to have.

In your future discussions I hope that you will remember these implications of global warfare. Time and space factors, shipping, reserves, and the levels of supply are crucial factors which materially alter plans. It is not always what we would like to do; instead, it is a question of what we can do. The realities of time and space and the output of our industrial plants and shipyards are the real tyrants that dictate our practical lines of action. Recent operations in the Mediterranean afford a good example. The spacing of amphibious operations undertaken against Sicily, against the Toe and the Heel of Italy, and at Salerno were determined almost entirely by the time required to assemble, load, unload, reassemble and dispatch the hundreds of seaborne craft involved.

III. PLUGGING THE LINE

At this stage of the war effort we can look back and distinguish two distinct phases which, happily, are now behind us. I like to call these two phases the "plug the line" period and the phase now drawing to a close—the period of driving back the enemy's outguards and uncovering the main enemy positions. I want to talk about these two phases briefly.

I need hardly recall the feverish actions which followed Pearl Harbor. They were the days when the enemy held the initiative and our paramount problem was one of defense. Troops were rushed to reinforce our defenses along the shores of the continental United States and along the outer extremity of the perimeter defense of this continent. To plug the line we had to spread ourselves very thin. We had to do many things as necessary stop gaps. Much effort, much materiel, and many defensive installations had to be installed that would be of little assistance in offensive action across the seas.

We were playing for time and doing our best during this period to bolster the defenses of our Allies. During this period it was American industry that carried the war against our enemies. Munitions of war in the form of Lend-Lease supplies to our Allies were truly our first offensive weapon. We were able to give to the British much of our war reserves because American industry was hard at work replacing them with more modern equipment. It was American-made equipment in the hands of our Allies that gave us the time to train and equip a modern Army. American tanks, American self-propelled guns, American trucks and American planes—these were the life-savers that enabled our Allies to survive while we got ready.

One of the substantial accomplishments of this early phase was the establishment of the Joint and Combined Chiefs of Staff in January of 1942. Problems of planning and allocating forces on a global basis demanded new and more efficient machinery and procedures. Old-time Army and Navy joint action methods were too cumbersome and ineffective. Something better had to be created. Likewise, an

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organization was essential to integrate the plans and actions of our armed forces with those of the British and our other Allies. The Joint Chiefs of Staff and the Combined Chiefs of Staff provided this much needed machinery. The organization and procedure was provided to weigh conflicting needs, to plan our future course of action and to decide what part each country and each component of the armed forces was to play. As you undoubtedly know, the world was divided into nine theaters: European, North African, Middle Eastern, China-Burma-India Theater, Southwest Pacific, South Pacific, Central Pacific, Latin-American and the American Theater comprising three Defense Commands, the Western including Alaska, the Eastern including Newfoundland, Caribbean including the Canal and Northern South America. With the Commanding Generals of each of these areas clamoring for the men, planes and munitions which we did not have in the amounts needed, you can well imagine the difficulties which beset the Joint and Combined Chiefs of Staff during their early days.

During the initial phase of plugging the line there was initially a great deal of indirect action required on our part to bolster various countries, and areas that seemed to be on the verge of giving up and on the verge of falling into the lap of the Axis powers. Here again it was American production that saved the day. It provided munitions of war which we could put into the hands of those who needed the wherewithal to do it to bolster their will to resist.

This plug the line period was not very satisfactory to anyone. We didn't like it any more than the American public. However, it was where we had to begin. It had to be done thoroughly and well. It set the stage for what was to follow and provided the substantial foundation for what was to come.

IV. ELIMINATING THE ENEMY'S OUTER DEFENSES

I think it will be of interest to consider for a moment the Axis at the peak of their success--the enemy situation which confronted the United States at the time when it was necessary to make our decisions and to start planning for offensive action. Public pressure was strong during this period for a bold attack which would strike home against the enemy. The situation was that we were in no position to strike deeply except through the air. Both in Europe and in the Pacific we were faced with the necessity of driving the enemy from his outer defenses and of securing positions from which we could launch a decisive attack against the enemy's heartland.

It may be of interest to review some of the factors which influenced our offensive action in North Africa. Our decision to initiate offensive action in North Africa was prompted by a number of factors, several of which have not been very well understood. I want to speak of several aspects that have received very little attention.

A British collapse in the Middle East would have caused severe repercussions, not only in the Middle East, but in India, China and Burma. The situation was so serious that immediately after Dunkirk the Prime Minister sent one of the only two fully equipped divisions remaining in England to this area. So much British strength and so much shipping were tied up to sustain this operation that so long as this condition existed, an attack against the citadel of Europe was out of the question. The resources required for the build-up were simply not available. This the Germans knew, and it was very easy for them to dispose their forces in such a way as to make an operation in limited strength a sure failure.

Planning for the North African venture had to start some six months prior to the scheduled landing. Events have more than justified the hopes of those who had the grave decision to make. In brief, this is what our success in North Africa has accomplished for us:

1. It has materially eased the very severe shipping situation.
2. It will make available substantial naval forces which can be used to very good effect in the far Pacific.
3. It has set into motion disintegrating forces which will make for internal collapse within the enemy's occupied areas.
4. It spreads the enemy thin and forces him to disperse his forces to meet attacks which may now come from many directions.
5. It provided air bases and other installations from which we can launch operations which will be required for decisive action in the Pacific.

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In the Pacific we faced an enemy who had been able to seize and develop an outer perimeter of defensive installations which protected to a marked degree his homeland and vital economic installations. In this area our action has been largely one to secure air bases from which we could launch attacks against the enemy installations. No military man has wanted to follow a line of action which involves hopping short distances from island to island in the Pacific. It has been very difficult even for our military people to realize the vast distances involved in the Pacific. The logistical factors which include establishing a secure line of communication have forced us thus far to operations against the perimeter. You can be sure that future operations will provide for by-passing these outer barriers to the maximum extent possible. Our activities in the Pacific emphasize again the very great efforts that we have had to make to set the stage for decisive action.

The principal weapon which we have used to set the stage for decisive action has been our air offensive both in Europe and in the Pacific.

To the great credit of the Joint and Combined Chiefs of Staff, every opportunity has been given to our Air Forces. Every assistance, every possible priority has been invoked to enable them to make the most of our opportunity to strike the enemy hard by air action. Our Air Forces had the pick of inductees coming into the Army. We have given our air effort every priority in industrial facilities, shipping and in every other respect that was felt necessary. I should like to enumerate what I think we may fairly claim as a result of our bomber offensive to date. These are:

1. To weaken the position of the German Air Force and compel redisposition of strength to the serious detriment of German operations on the Russian and Mediterranean fronts.

2. To lay the oil industry open to critical reduction of supply through further attack.

3. To reduce deliveries of military equipment by successful attack on critical industries, such as ball bearing plants, aircraft and engine factories, as well as heavy industry.

4. To cut 1943 U-boat production and to reduce the capacity of major submarine bases.

5. To reduce the margin of safety in the German rubber situation.

6. To dehouse 1,800,000 persons, divert substantial resources to defense and repairs, destroy public confidence in German political and military invincibility, and generally lower morale.

In brief, our air offensive has materially softened the enemy and has greatly reduced his capacity to resist. It greatly assisted the Russians by forcing the Germans to withdraw a sizable portion of their air forces from the Russian front. With air fields in Italy we are now in a position to force the enemy to scatter further his fighter squadrons. Because of their limited range, fighters cannot be shifted with the ease with which we can move our strategical air force of bombers. The operation of our Eighth Air Force in England should meet much less resistance as soon as we can establish bases in southern Italy from which we can employ the North African Air Force. This will force a further dispersion of German aircraft which the Germans are in no position to make.

Our air offensive against Germany has forced them to make a decision which will be full of meaning to you production men. The combined bomber offensive against Germany has forced the Germans to drastically reduce the production of bombers and to concentrate on the production of fighters. To every thoughtful member of the German Air Force, this step could have but one meaning—that Germany had given up hopes of winning the war and was turning her every effort to keep from losing the war. This step, taken months ago, was the first visible evidence that Germany had abandoned the offensive and was seeking through defensive action what at best could only be a stalemate.

Do not let the success of our bomber offensive make you over-confident. It has been a powerful factor in softening the enemy. It is worth noting that our equipment losses have been very heavy, even though our operations thus far have had

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relatively easy going. Our losses of materiel during the 37 days of the Sicilian campaign were significant. Forty-six per cent of all the 57mm guns we landed were destroyed, 36 per cent of the motor carriages for our seventy-fives, 22 per cent of the carriages for our 105mm Howitzers, and 54 per cent of the carriages for our 37 mm guns.

V. PERIOD OF DECISIVE ACTION

We are now rapidly approaching the time when we can come to grips with the enemy in decisive action. We still have some preparatory action to complete in both Europe and in the Pacific, but by and large the build-up period preparatory to decisive action is here. Let us look for a moment at the present strategical situation. Before discussing our future possible lines of action I wish to point out various advantages and disadvantages which will assist or handicap our future operations.

By far our greatest asset is that we now hold the initiative. We can strike the enemy when and where we choose. He must be prepared to resist our attack from many directions and in many widespread areas. We can concentrate our strength; the enemy must dissipate his forces to cover the possible routes of approach.

Partially offsetting this advantage is the enemy's fortunate position with respect to operating on interior lines. Every withdrawal enables both Japan and Germany to ease their supply problems and to economize further on the military forces needed. Every advance on our part extends our line of communication and adds to our logistical problems.

From a strategical viewpoint, the advantage which the enemy possesses by being able to operate on interior lines holds only so long as he is able to maintain a strategic reserve. By forcing the enemy to extend his defensive forces, by constantly wearing his forces down by natural attrition, and by inflicting severe losses in battle action, we hope to destroy the enemy's strategical reserve. When that day arrives victory will not be far off.

As our enemies shorten their lines we gain one further advantage. Air bases become available which uncover enemy areas that have hitherto been too distant for effective bombing. With the acquisition of bases in Italy, every vital point in Axis Europe can now be bombed. As the Russians advance, bomber bases in the North will complete the triangle and extend our bombing capabilities. Similarly, it will force a further scattering of Axis fighters to guard the additional routes of approach to the target areas.

There are certain technical improvements which the Germans are making which may offset to some degree the strategical advantages which our air offenses will enjoy. By concentrating on fighters, the Germans hope to develop something that will stop our bombers. They are making every effort to develop a new defensive means, they seem now to be concentrating on rockets which can be launched from their fighters and which they hope will stop our bombers. So far they have not succeeded, although fighter opposition to our bombers has increased and in some attacks deep into Germany our losses have been severe.

There is one other sobering fact which you should realize. As we uncover the enemies' main positions, fighting will be tougher and our losses in men and equipment will increase. In North Africa the Germans did not hesitate to sacrifice the Italians who didn't mind surrendering. In Sicily the Germans had three and one-half divisions and the Italians had 12 which were of doubtful combat value. It took the two best armies of the United States and Great Britain, containing a total of 13 divisions, five weeks to overcome the bitter defense of an enemy whose air cover had been removed and whose supply lines were paralyzed by our overwhelming air superiority. Today in Italy we are faced by nearly 20 German divisions; beyond Italy are the Alps, a formidable natural defense line and many more German divisions. At the present time, Germany is capable of opposing any attack on a vital portion of her European defenses with at least ten times the German forces defeated in Sicily. The fighting ahead will be hard and bloody. If we become over-confident or sit back and coast either in the Army or on the production front, we will be inviting disaster.

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The Russian situation must be considered in any discussion of our future plans against Germany. It should be pointed out that the advance of the Russians from Stalingrad, magnificent though it is, represents the achievement of the entire Russian force over the period of a year aided by the very substantial quantity of Lend-Lease supplies furnished by American industry. The Russian front today is still far removed from the German frontier. To the Russians we owe a great debt. They are engaging the great bulk of German forces. By their persistent attacks and by winter operations wherein weather becomes an active ally the Russians are steadily closing in on the Germans and exacting a very high toll in German manpower, supplies, and transportation.

Naturally, I'm not going to tell you which line of action we will take against Germany. What I wish to emphasize is that in our operations so far we have set the stage and have opened up a number of practical alternative routes of invasion. This is forcing and will force the Germans to spread their armies thin. With a main attack on one area and several subsidiary attacks at other points, the prospects of a successful attack on the enemy's so-called fortress Europe are not too unfavorable. Had we jumped the gun and tried an early amphibious attack against enemy occupied Europe, we probably would have been thrown back with a very bloody nose.

Turning to the Pacific, we see that Japan, like Germany, has the advantage of interior lines and can move in a few days ships and planes between points in the perimeter of her defenses. She is favored defensively by terrain which includes jungle, mountains, and vast, well-fortified water approaches requiring large scale amphibious operations for the assault. Distances in the Pacific are also tremendous. Using as a yardstick the distance from London to Berlin, which is approximately 550 miles, it is about eight times as far from Salamaua in New Guinea to Japan. It is approximately four times as far as from our Indian bases across China to bases on the Asiatic coast opposite Japan.

VI. CONCLUSION

In concluding, there are three points which I want to leave with you. I want to lay these matters right on the line with all possible clarity and emphasis.

I would emphasize first that the Army is fully conscious of the job ahead. In General Marshall, in the Joint and Combined Chiefs of Staff, and in our principal commanders overseas, you have the leadership that will carry the war to a successful conclusion in the shortest possible time. That leadership has painstakingly planned the course ahead after a most thorough and accurate evaluation of the factors involved.

In all our thinking and planning we have sought to capitalize on our superior equipment and weapons. We are determined to give the American soldier every possible break by arming him with the best, by giving him every possible support in the form of armor, superior planes, better guns, massed fire power, and every other conceivable mechanical aid that will increase fighting power and save lives. We will not hesitate to sacrifice equipment, munitions, and supplies when by so doing we will save the lives of American soldiers. That brings me to my second point.

The American soldier has been magnificent in battle. In Tunisia, Sicily, Italy, Guadalcanal, New Guinea, Alaska, in the air, and in all our scattered points our men have displayed a spirit of sacrifice, energy, and initiative that makes me feel very humble and proud. Their willingness to make the supreme sacrifice stems largely from the staunch support which they get from their families at home. As an example, I want to read to you what one father wrote to General Marshall in reply to the Chief of Staff's letter of sympathy on the death of his son in action. This is what one small-town New England father wrote:

> "My dear General Marshall:
>
> I am grateful for your message concerning the death of my son, and am not unappreciative of the sympathetic understanding which would interrupt a burdened day to send it.
>
> My wife and I agree that there was no finer way for our son to die than in the service of his country.

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We also realize that we are more fortunate than thousands of parents whose boys are lost in distant places, or who must remain in distress of mind because the fate of their sons cannot be determined, perhaps ever.

But may I add, sir, this word to you out of some qualification for the authority to do so: Our plain people in this part of the country most touched by the war know what it is about, are prepared to meet the sacrifices required of them with reasonable fortitude, want to do their full share to help win it, and give you their confidence and loyal support to the end that victory to our arms shall be neither in doubt nor long delayed.

Respectfully yours,"

With determined and competent leadership and with such fine American soldiers, there is but one other essential item, and that is an all-out effort on our production front to give us more weapons, more ammunition, and more equipment. The Army will not fail you. You give us the goods. We will deliver them.

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September 28, 1943

I M M E D I A T E R E L E A S E

STATEMENT ON "MANPOWER,"
DELIVERED BY
MR. JAMES P. MITCHELL, DIRECTOR,
INDUSTRIAL PERSONNEL DIVISION, A.S.F.,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR AND NEWSPAPER LEADERS,
SEPTEMBER 28, 1943,
WASHINGTON, D. C.

Whenever the Nation's manpower problem is discussed, somebody inevitably questions the size of the Armed Forces. The question is valid, but when it is presented as *the* whole manpower issue to the exclusion of all the rest somebody is befogging the issue.

The plans of the Army and Navy have *never* called for a total combined strength which would exceed 17 per cent of the country's labor force. Complete preoccupation with 17 per cent of the problem to the neglect of the remaining 83 per cent is cutting off the view of the forest because of a few trees. When one considers the additional millions of persons of working age who should be in the labor force and are not, the total role of the Armed Forces is even smaller.

Two major steps were involved in determining the manpower objectives of the Armed Forces. First, the strength requirements were measured on a basis of strategic military plans. Secondly, the desired strength was carefully measured against the manpower available in the Nation and the needs for both military and civilian production. *The data clearly show that the manpower available in the United States is more than sufficient to meet the needs of the Armed Forces, war production, and essential civilian production*.

The Chairman of the War Manpower Commission was right when he testified before Congress two weeks ago that there is no overall national manpower shortage. Here are some factors which contribute to the *appearance* that we do have one:

1. The American people are not yet mobilized for war. A far smaller proportion of our population of working age is either at work or in the Armed Forces than in any other major nation at war. A substantial reserve of idle labor, principally women, remains unused.

2. In spite of this reserve, our civilian labor force during 1943 has remained below the level reached last year. New additions to the labor force have failed to match the withdrawals for the Armed Forces and the Census Bureau reported that in August the civilian labor force was 1.3 million below what it had been a year ago.

3. Although a tremendous increase has taken place in war employment and the size of the Armed Forces, we have hardly touched the vast reserve of potential war workers in non-war manufacturing, construction, trade and services, or in agriculture, which has increased its employment. On balance these groups have changed little and have contributed virtually nothing to the *war* labor force. In other words there has been virtually no net movement of workers from non-essential to war activity. The expansion in direct war activity has come almost exclusively from the unemployed and from new entrants into, or additions to, the labor force.

4. Manpower is maldistributed. While there is enough labor available to meet all requirements, there are acute shortages in some areas at the same time that great surpluses exist in others. According to the latest classifications of the War Manpower Commission, there are 59 important labor markets where "current acute labor shortages" exist while there are 91 important labor markets where "labor supply is and will continue to be adequate

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to meet all known labor requirements." For instance, in California where much of our vital airframe industry is concentrated, there will be a shortage of 92,500 workers even after all potential reserves are used; but in Texas there is a net surplus of 182,000.

These situations and other difficulties, such as turnover, cannot now be cured without a national service act. Such legislation is badly needed today. The War Department will continue to advocate a National Service Act as a basic essential tool, employed by every other major nation at war.

However, we are not under the illusion that such legislation alone will solve our difficulties. Even when such legislation is obtained, there are other fundamental responsibilities which must be discharged by employers, labor and our communities, or the problem as a whole will continue acute. We will devote ourselves here to two such major responsibilities.

LABOR UTILIZATION

In war time it is the solemn obligation of every consumer of manpower, as well as materials, to keep his need to an absolute minimum. The Army tries to meet its own obligation by continual study of its needs and the development of techniques for conservation. Since we set our original goal, the Army has reduced its demands for military manpower by more than a half-million. This was achieved by a careful analysis of every spot where a soldier could be spared. Defensive installations in the western hemisphere will be reduced by approximately 98,000 and 80,000 men will be saved by reductions in overhead and in our replacement and school program.

The Army is also a large consumer of civilian manpower. In June, 1943, we had 1,347,000 civilian workers in our arsenals, depots, ports of embarkation, modification centers, etc., throughout the United States. Since that time, by improvements in techniques and careful study of every job we have cut that figure by 144,000—more than 10 per cent! It was not easy; it took ingenuity, and drastic revision of methods.

We are continuing to examine every possible device to save manpower, but the Army, with its combined military and civilian personnel comprising less than one-sixth of the labor force, cannot solve the entire manpower problem. The major portion of this burden necessarily falls upon you and the forces you represent—Management and Labor.

Management and labor have already shown that a vast amount can be done to increase productivity. It is the actual accomplishments in some establishments which we take as our guide posts to what can be achieved generally—not theoretical goals worked out on blueprints. One aircraft company, making heavy bombers, reduced the number of manhours per bomber from 110,000 to 27,000, and is now producing four bombers with the labor previously required to make one. Numerous other examples might be given.

The changes which have taken place are of an infinite variety: Shifts in plant layout, job simplification, upgrading of workers, redesigning of machines, short cuts in transportation of materials, etc. Sometimes it was just a matter of improving morale. Moreover, in many cases conservation of manpower went hand in hand with an improvement in quality.

Many of such improvements result from better labor-management cooperation, effective labor-management committees, and suggestions from individual workers.

These accomplishments indicate the tremendous possibilities for improvement elsewhere. When one firm can reduce its labor requirements per unit by 75 per cent, one naturally questions the failure of another firm to improve at all. The record is uneven, and much remains to be done.

Obviously, one of the simplest techniques available is for one firm to learn from another. Records of comparative manhours by firms making similar products

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immediately reveal striking differences. The experience of the more efficient company should be made available to the others. The media for exchange of management experience should be enlarged. And you can depend on the War Department to help clear the channels for such exchanges.

The Ordnance Department has demonstrated the practicality of such technique in its government-owned, contractor-operated establishments, where exchange of information between the more and the less efficient firms has in some instances improved the latter's efficiency by as much as 40 per cent.

Many employers have told us of large increases in labor efficiency resulting from small improvements in plant facilities for workers. Making available hot meals, short rest periods, recreational facilities, and better light or ventilation, giving the worker a greater sense of participation through inviting his suggestions and keeping him informed of plant progress and change, have all been found by some plants to contribute to higher efficiency.

In concluding this item, I want to emphasize that one of our most important manpower reserves lies within our own plants. There are two ways of making manpower ends meet: One is to bring in more labor, the other is to reduce our need for labor by increasing the productivity of the labor we have. Without a national service act, we are approaching the limits of the first possibility. We must fully explore the second. A 10 per cent increase in labor efficiency is equivalent to a 10 per cent increase in your labor force—only it's more effective, more lasting, and under present conditions more practical—and it's a job only YOU can do.

COMMUNITY ORGANIZATION AND SUPPORT

In time of war at least, the number of people who will work in a particular plant (or enter the labor market at all), as well as worker efficiency and rates of turnover and absenteeism, depend upon conditions of life outside as well as inside the plant.

The number of in-migrant workers who can be moved into a community is dependent upon the amount and type of housing available for them to live in. Workers' preferences as to plants will frequently depend upon the relative adequacy of transportation facilities. Rates of absenteeism are often related to the availability of shopping, banking and other personal service facilities during non-working hours. Efficiency at work, as well as absenteeism, is closely linked to the availability of recreational facilities during leisure time. And everybody now recognizes the relationship between the adequacy of child care facilities and the number of mothers in a community who are willing to take jobs and stay at them.

These things are largely dependent upon the community—not only what facilities it has, but the adaptation of those facilities to the exigencies of war. The War Department has seen striking examples of what the differences to production between a community fully backing the war and a community following its normal peacetime patterns.

The proportion of women at work in some communities exceeds the proportion in others by as much as 25 and 30 percent and the reasons are apparent. In one community a woman is proud to work in a war plant because the general atmosphere is such that she is regarded as a slacker unless she is at work. In other communities we find a hostile attitude toward the woman worker; she is accused of being greedy for war wages or neglecting her children, or it isn't socially acceptable for a woman to do factory work.

Go into Wichita, Kansas, which is a war boom community if ever you saw one—the population has doubled since 1940—and you find it is successfully meeting its production and manpower problems. One of the reasons is plain. Stores and banks are open at night, movies run midnight shows, there are dances for late shift workers; transportation schedules have been adjusted to the convenience of war plants; ample new housing facilities have been provided. A worker does not have to take a day off to shop or to find some relaxation. He does not quit his job to go to another community because his living conditions are bad.

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All resources of the community have been mobilized to recruit every potential worker for miles and miles around. The press, the schools, the churches all cooperate.

In other communities where our production was failing we have generally found that these things were not being done. The community was indifferent.

In this type of community the War Department has sometimes had to remove contracts as a means of self-protection—protection to more vital contracts whose timely performance was threatened by manpower difficulties. We cannot continue to place contracts in an area where manpower problems are so acute that essential war production schedules may not be met. We do not like to remove contracts. It is difficult, it throws our schedules out of line, it causes delays, it is costly. But we are forced to when a plant or a community, or both, fail to meet their own problems.

Who is the community? You, its leaders. Business, labor, industry, the press and radio. The leadership you exercise, the pressures you apply, the interest you show, will determine whether management and labor in a plant will work in a community environment which will interfere with your job, or one which will ease and help solve your production problems.

Seven months ago, the War Manpower Commission officially advised the War Department that it would be impossible to obtain sufficient labor in Dayton, Ohio, to meet its production goals. The War Department considered the removal of some of its contracts. When word of this reached the people of Dayton, they got to work in their own community to lick what was in effect an artificial shortage. Today, the War Department is no longer considering the withdrawal of contracts from Dayton and the War Manpower Commission has reclassified it from Group I to Group II. The Dayton story is a valuable practical example of how community action can help industry and labor solve production problems.

As the war continues, manpower stringencies will get tougher. The war industries of the country and the Armed Forces require several million more persons before leveling off. The three chief sources of manpower remaining are (1) idle persons, chiefly women, who are not in the labor force; (2) persons engaged in non-essential activities; and (3) the more efficient employment of those already in our plants. National service legislation is essential for the mobilization needed for earliest possible victory. But the tasks outlined here —maximum utilization of labor and vigorous community action—are equally significant, and these depend on us!

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IMMEDIATE RELEASE

REMARKS BY
LIEUTENANT GENERAL WILLIAM S. KNUDSEN,
DIRECTOR OF PRODUCTION,
ARMY OF THE UNITED STATES,
BEFORE WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR, AND NEWSPAPER LEADERS,
SEPTEMBER 28, 1943,
FORT BELVOIR, VIRGINIA.

I am not going to talk to you about production. I am going to tell you how I went out to call on a customer. It happened here about a month ago when the Under Secretary of War was kind enough to invite me to go on a trip in the Pacific.

I have, during the last three years, traveled quite a lot by airplane in this country but I confess to you frankly that this is the longest airplane trip I ever had in my life. I have never seen as much water as I saw in this trip.

We started out at the Washington Airport. The plane was comfortable. We ran nonstop to San Francisco from Washington. We had bunks. It was the first time I had ever done that.

The journey was quite uneventful, except when we got about 40 miles on the other side of Salt Lake City, we hit an airpocket. The plane dropped a thousand feet. It felt like a thousand miles. We got to San Francisco without incident.

The following night we took off for Honolulu. It was a good experience. We got to Honolulu the first thing in the morning. Everything was very beautiful. I have never seen land look any nicer. We had a ride around the island and saw the installations, saw Pearl Harbor. Then we took off again for an island. I remember it very well. Eddie Rickenbacker told me that was the one he missed. I was a little nervous. I dozed off. About half past seven the steward said, "General, we will land in a few minutes." For the second time land was a welcome sight. The island was about 80 miles long and 4 miles wide with a lagoon in the middle. It looked for all the world like a doughnut. It was pretty.

Next we went to New Guinea. The island is full of meadows. They have nickel, copper, iron. In the northern part there is a road built out of iron ore. From there we flew to Brisbane. There was no mistaking it.

From there we went to Port Moresby in New Guinea. I had the pleasure of spending my first evening with a Colonel whom a good many of you know in the aircraft business. We had a good evening. We took all the planes apart and put them together again. I was very much impressed with the methodical way in which they go about knocking off Japs. It is jungle warfare. First thing you have to do is knock off the base. You do that with bombs. Secondly, you knock the pill boxes, using mortars. Aside from that you have a tremendous job in handling supplies going in there.

From there we went back to Australia, inspecting shops in Brisbane, Sydney and Melbourne. We also went to New Zealand. I inspected the biggest steel factory in Australia. At New Zealand we don't have major industries outside of ship repairs. But we do furnish an extremely large amount of food to our troops.

The New Zealanders are extremely grateful to America. To use blunt language, we saved their bacon. The Japanese threat is off. The same thing

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applies to Australia, and New Zealand troops.

From there we went to Guadalcanal, took a trip up to Munda where the big firing is going on. We went to Tulagi. That just about finished the program. From there we went back to Fiji, then to Honolulu and them home.

If you are going to try to sum up what you had seen, you would divide it into three parts, gasoline stations, on your way in, extremely well managed, orderly and clean. They all have facilities, airfields, and hospitals.

We saw a lot of wounded men. The Secretary went in to talk to a lot of them. I talked to some of them and it was quite apparent that these fellows were in high spirits. We asked them how they were getting along and their answer was "We are getting along fine; we are going to get out soon." The hospitals were run well and the boys seemed to be well taken care of.

The second summary I could make would be Australia and New Zealand. Here you have a country as big as the United States with 7,000,000 people, and the only thing they are really short of is water.

On a fringe running from Brisbane around to Perth, a fringe of perhaps 100 or 250 miles wide, is the only cultivated part in Australia. The rest of it is all barren hills and mountains and is desolate.

The aborigines who originally occupied Australia had gradually been forced up into the northeastern part. I was told there are 75,000 left.

Down in Fiji they are just like Greek gods. The men were beautifully formed and had classical features and were about the most good natured people I ever ran into in my life. They had a spear in their hand, but you somehow could not feel afraid of them. The Judge and I were made chiefs. They gave us wicker chairs and these fellows came in and did a dance. The natives sat on the ground.

Australians are extremely fine people. The soldiers, according to all reports, are outstanding fighters. There is a sort of free and easy way that is peculiar to Australia and its people. They are doing everything they can to help us get supplies or whatever else we need.

They also have a charming way of speaking. I can give you a little example of it. Up in the Northern Part of Australia there is a hospital and they bring the boys over there from New Guinea and the islands. Here comes a youngster who was shot through the chest. Of course, he finds himself in a strange place—nice clean bed—and the nurse comes in and pats his hand, wipes his brow and he gets up and says, "Did they bring me here to die?" and she says, "Oh no, we brought you here yesterdie."

You really see what you come out to see when you go up close to the battle area. There you see the equipment working. There you see men working as you and I have never seen before. I was tremendously impressed. There is the climate, there is the jungle, the insects and the sticky heat, and here are all these people that you got over there working and fighting without a bit of complaint.

I remember seeing a fellow operating a bulldozer all by himself out there making a road. He did not have anything on but a pair of shorts and a pair of shoes and a trash hat and he sat on that bulldozer and was singing to beat the band.

At Port Moresby there are quite a few air fields over there and there are four or five under construction.

You start at the beach, and the boats are landing in and you have to angle on the road. Everything must be taken in small barges or in some of these ducks. When you get it ashore, you have to find ways and means of unloading the barges.

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They haven't got good roads to disperse this stuff and it has to be scattered so it will not be in danger of bombing. The amount of construction work that has to be done is enormous.

Here you come into a flat beach and start out with nothing and in an incredibly short time you have a community with roads and light and water and water is sometimes scarce. You have gas installations and you even have a movie show. That is all the entertainment that can be offered up there or perhaps a ball game.

You cannot imagine, gentlemen, what the conditions are in places like that. I thought I knew my geography pretty well, but I never realized until I actually saw what these fellows are up against, and what they are doing for you and me. I will never forget it as long as I live--the cheerfulness, the good humor and the healthy looking boys running around there, working, working, with only one thing in mind--they want to kill the Jap.

When I left here, I felt an intense pity for the people who, by wishful thinking, think this thing is going to be over today or tomorrow or Christmas or the 4th of July. We've got a job ahead of us and in front of us and so help us, all of us who are back here ought to see to it that these boys have everything in the world that they need to fight with because they got a job ahead of them.

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September 28, 1943

IMMEDIATE RELEASE

REPORT ON "CONTRACT PRICING"
DELIVERED BY
MR. WILLIAM L. MARBURY,
GENERAL COUNSEL, PURCHASES DIVISION, A.S.F.,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR AND NEWSPAPER LEADERS,
SEPTEMBER 28, 1943,
WASHINGTON, D. C.

The War Department recognizes that its contractual policies present serious problems to industry. I think it may be well to begin by explaining why this is so. For that purpose I would like to present briefly an explanation of the thinking which underlies the War Department policies in this field.

In the light of the great need for increased production which has been so compellingly presented to you here, I am sure that all of you will understand that the War Department must take every reasonable step to insure that industry achieves the most efficient use of equipment, materials and manpower; especially manpower. Upon our ability to accomplish that result depend the lives of our men at the fighting fronts. The efficient use of equipment, manpower and materials means maximum output and low costs; and low costs restrain inflation and prevent increases in living costs, protect the public credit and insure the survival of industry in postwar competition. It is the low cost business that will provide jobs in the future, both for management and labor. There is no reason to doubt that a program directed to obtaining efficient production is entitled to the willing cooperation of both management and labor.

This is the keystone of the War Department's contracting policies. It has been our view that the greatest contribution which we could make to the increase of production would be to employ those methods of contracting which would bring the strongest pressure to bear on manufacturing costs. Accordingly, the War Department adopted the policy of placing contracts at fixed prices whenever possible and developed administrative procedures designed to assist contracting officers in negotiating contracts at prices which would eliminate unreasonable allowances for contingencies. As you all know, that policy has been strongly endorsed in the recently published Baruch Report, which criticizes the cost-plus-a-fixed-fee type of contract, and I think that you may look forward to greater pressure from the War Department in the direction of close fixed pricing.

It is true, of course, that the cost-plus-a-fixed-fee type of contract has its necessary place and it is also true that some contractors who are operating under that form of contract are making efficient use of both manpower and materials. Nevertheless both in theory and in practice there can be no doubt that there is no direct financial incentive to reduce costs or to eliminate wasteful practices. At any rate that is what the War Department believes and its policies are based on that belief. We must all look forward to an increasingly sparing use of this type of contract. On the other hand, the lump-sum contract fixed at a price so high as to protect against all risk has little if any greater merit than the cost-plus-a-fixed-fee contract. If our primary objective is to be obtained, therefore, we must by careful negotiation fix prices fairly close to efficient costs.

This policy presents the contractor with serious problems, because War Department contracts call for long-term commitments. Some of them call for performance over periods extending many months into the future. It is hardly reasonable to expect contractors to assume the risks of possible increases in costs beyond their control which may arise during that period. Plainly some method must be devised to meet this situation. To meet this problem we have provided for adjustments in prices in the event of interference with production schedules through allocations of materials, in the event of reductions in delivery schedules and in the event of partial or total termination. Under the stimulus of comment and criticism from our field agencies and contractors we are constantly improving these provisions.

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The War Department has also authorized a method of short-term prices designed to give adequate protection against uncertainties as to uncontrollable costs. This method of contracting permits an adjustment of the unit price at the call of either party at periods of from four to six months on the basis of conditions then prevailing. Thus it makes the long-term contract equivalent to a series of short-term contracts and eliminates the necessity of forecasting the future far ahead. Under it the contractor may safely agree to a close price based on current conditions. On the other hand he may make commitments for materials, supplies and component parts as far ahead as may be necessary with the assurance of a fixed price which cannot be changed without his consent.

The forms now authorized for use by the War Department have been published in the Procurement Regulations. There is nothing sacrosanct about the words that are used in these published forms and modifications have been and are being made to meet well founded criticisms. I believe that these provisions will repay a careful study by each of you.

As a further stimulus to reductions in costs, the contract provisions call for recognition of the efficiency of the contractor in the negotiation of the price for succeeding periods. Furthermore, in cases where prices are shown to be close and segregation is feasible, these contract provisions likewise authorize exemption from renegotiation. Where this exemption provision is used, the contractor has an added incentive. Accounting difficulties have limited the use of these provisions, but the War Department has been wrestling with this problem and believes that the use of this power to exempt from renegotiation can and should be extended.

The War Department also has under consideration the use of the forms of target price recently published by the Navy Department and the Maritime Commission. Most of you are probably familiar with the details of these contracts. If not, I commend them to your attention.

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September 28, 1943

IMMEDIATE RELEASE

REPORT ON "PRICE ADJUSTMENT,"
DELIVERED BY
MR. JOSEPH M. DODGE, CHAIRMAN,
WAR DEPARTMENT PRICE ADJUSTMENT BOARD,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR AND NEWSPAPER LEADERS,
SEPTEMBER 28, 1943,
WASHINGTON, D. C.

In this brief statement I have no intention of entering into a discussion of the many complications and details of renegotiation, only to give you a few fundamentals of general interest.

If it is realized that renegotiation is directly related to war procurement, as it is affected by unknown volume and shifts in production emphasis, plus the development of and changes in war products, and that it is essentially a pricing job, most of its processes and conclusions can be easily understood.

The primary purpose of renegotiation is to accomplish sound pricing. It acts retroactively through the medium of refunds and prospectively through reductions in future prices. Its essential purpose is to make sure that no more than a fair price is paid for war products, and price includes no more than a reasonable profit after consideration of all the pertinent factors connected with the situation of a particular business.

You will observe that the War Department Board is called a "price adjustment" board and that the operation is carried on through the "price adjustment" sections of the various services.

From its beginning the price adjustment organization has been staffed by the best available experienced business or professional men. Everyone engaged in the work believes in its necessity under conditions in which the government is the principal buyer and there are not enough producers to provide the normal pressure on prices created by competition. I want to emphasize that this belief does not arise from words read in a book, nor was it created by directives. It comes to those working at the job because of what they see in what they do. The files of every price adjustment agency bear ample witness that what they do is necessary. This is a point too often overlooked by some business critics of renegotiation who fail to recognize that this is a service essential to the protection of business as well as the protection of government.

Renegotiation has had and still has many problems. It is a complicated process. It deals intimately with the conditions of each enterprise as components of an individual problem requiring an answer. You can be sure of this. Whatever the problems are, they are being met by people sincere in their effort to arrive at a just and reasonable answer, within the limits of the responsibilities established by the law and the policies and procedures created to implement the law.

I would like to suggest to you that, on the average, you are likely to hear complaints with too few of the facts. We find that when we get down to individual cases, most complaints cannot be supported. Renegotiation is just a continuous series of individual cases. No one can judge a renegotiation settlement without all of the facts and considerations which were involved in its conclusion. Again, too, often, the renegotiation issue is confused with

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contentions or problems which are not directly related to it. It is my own belief, arising from considerable experience in the actual conduct of renegotiation, that if most men had the same job to do and the same facts to work from, the decisions would be very much the same.

No one will deny that business has many problems and that among them is renegotiation. However, in many instances, the problems charged against renegotiation are inherent or fundamental to the situation of a particular business. They exist entirely apart from and prior to renegotiation. They are usually directly related to problems of the financial management of business expansion. There is frequently an insistence on high prices which include high profits on government war purchases for the purpose of meeting some already established financial, plant or equipment illness and the cost of business expansion.

Obviously, the result of renegotiation has been to remove what appeared to be excessive profits included in prices. Further, most renegotiations are settled in a large part by taxes that would have been paid on the original prices and the profit therefrom. Therefore, renegotiation can only add to any problem the difference between the taxes on the original price and profit basis, and the taxes on a readjusted lower price and profit basis.

Too little emphasis has been given the real cooperation of the large number of contractors with whom the various services have easily reached an agreement on an adjusted price and a limited profit.

A joint report of the services shows that as of the end of August, written or oral agreements covering 1942 fiscal year profits and prices had been reached with 6,389 war contractors. In most cases, agreements were reached with little difficulty other than the technical problems involved. This speaks of the understanding and cooperation of industry and the general acceptance of the processes through which renegotiation agreements are reached.

There was originally much concern about the case load to be processed. This has been met by an arrangement with the Treasury Department permitting examination of brief transcripts of income tax returns for the purpose of screening out contractors who should not require renegotiation. At the end of August, the settled and in progress cases represented 86 per cent of total assignments.

There is no intention in the War Department nor on the part of any of those responsible for renegotiation to expand, extend, or perpetuate it beyond the necessities of our war procurement. In the meantime, the work is made mandatory by Congress.

At the recent hearing before the House Ways and Means Committee, the Under Secretary of War stated:

> "I remain of the view that continuance of the renegotiation statute for the duration of the war is in the public interest. On the other hand, in view of the oft-expressed fear that renegotiation may become a permanent fixture, it should be clearly understood that the basic reasons requiring renegotiation will largely cease with the end of the war, and there is no reason that provision should not now be made expressly providing that the renegotiation statute shall not apply to contracts entered into after cessation of hostilities."

It is quite possible that our war production expenditures will substantially decline before all hostilities cease. Ultimately, terminations will tend to replace procurement--and real competitive pricing conditions on government business will become effective as the requirements for war products decline in importance. When that time comes, but not before, we should eliminate renegotiation.

I want to express to you very frankly that one of my personal objectives in assuming this post is to look forward to and help determine the time when elimination of renegotiation will be possible. Until that time comes, and I hope, with you, it is soon, I want to express the appreciation of myself and my associates for the very real cooperation we have had from most of industry.

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September 28, 1943

IMMEDIATE RELEASE

EXCERPTS FROM REPORT ON "INTERNATIONAL AID"
DELIVERED BY
LIEUTENANT COLONEL WILLIAM S. GAUD, JR., G.S.C.,
ASSISTANT TO THE DIRECTOR,
INTERNATIONAL AID DIVISION, ARMY SERVICE FORCES,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR AND NEWSPAPER LEADERS,
SEPTEMBER 28, 1943
WASHINGTON, D. C.

The War Department, in addition to equipping our armed forces, procures a vast amount of supplies for our allies. These supplies fall into two broad categories. First, military end items used by the armed forces of our allies. Second, civilian supplies for the inhabitants of liberated areas. I propose to tell you a few salient facts about our program for each.

You might be interested in the overall size of our lend-lease program for military items. The 1943 program calls for approximately $5,400,000,000 worth of military supplies. However, it is anticipated that we will go into the red to some extent. This deficit must be made up in 1944 and, if we add that deficit to our filed requirements for 1944, we will have to procure for lend-lease purposes in 1944 substantially the same amount of goods which we expect to procure in 1943.

The extent of International Aid which we have been able to give to our allies has been limited by two principal factors. These are, shipping, and the necessity of giving priority to our own troops on certain items which we have been unable to produce in sufficient quantities to meet all demands. Shipping has perhaps been our greatest difficulty. China, for example, is the prime illustration of our inability to supply an ally with equipment which she badly needs and which we would like to give her.

You heard yesterday of the superb job which the Army Air Forces have done in maintaining the air route to China. Obviously, such a method of transportation has serious limitations when we are attempting to supply a country which has an Army even larger than our own. That is particularly true of China, since her Army is armed with antiquated weapons. She needs almost everything.

We have not, however, been sitting idly by waiting for a land route to be opened into China. General Stilwell has established in India a great training camp for the Chinese. Cargo planes which carry American supplies into China return to India loaded with Chinese soldiers. They are there equipped and trained by American soldiers.

Today, some of these Chinese are already guarding the American Army Engineers who are building roads. Most of them, however, will return to China to train their fellow Chinese in the use of modern equipment. When they return, and when land transportation routes are available, they will be able to serve the purpose for which they themselves have been trained, only if arms and supplies are ready for the troops in China whom they in turn are expected to train. That day has not yet arrived. but it will surely come. In short, there lies ahead of us a real job insofar as aiding China is concerned.

Our aid to Russia has likewise been limited by transportation difficulties, although the Russian situation is of course by no means as acute as that which prevails in China. For one thing, there are several ways of reaching Russia. Some of them have proved very costly in the past, although in this respect, the lessening of the submarine menace is making our job easier. Today, we are

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pouring tanks, trucks, guns and ammunition up through the Persian Gulf, across Iran and into Russia's backdoor so fast that it is straining Russia's transport system. The troops of the Army Service Forces have done a tremendous job in building port facilities and roads, and in overcoming many obstacles in primitive Iran to increase our aid to Russia over this route. Largely as a result of their work, Americans can take a just pride in the fact that arms and ammunition produced in this country are helping to push back the Nazi lines. However, our job is by no means finished on the Russian front. We must continue to support Russia in the future as we have in the past.

We likewise have a substantial program of lend-lease aid for the French in North Africa. In Tunisia, those French troops who fought at our side did so with world war equipment which was no match for the more modern equipment of our enemies. Today, we are supplying eleven French combat divisions with complete equipment. These divisions, together with their supporting troops, make up an army of well over 400,000 men who are anxious to fight and who have particular and bitter reasons for doing so.

From the standpoint of an American, it by no means detracts from the romance which attaches to the famous French Foreign Legion to realize that it now rides in American jeeps, fires American guns and operates American tanks. The Legion will be heard from when the conquest of Europe really gets underway, just as American-equipped French Commandoes have already been heard from in Corsica.

I have not yet mentioned our largest lend-lease customer—Great Britain. The story of our assistance to her is well known. Everywhere that British, Australian, New Zealand, Indian or South African troops are fighting today, they are using equipment which came in part from the United States. Mr. Churchill has commented more than once on the part which our tank destroyers played in the battle of El Alamein. There have been numerous other instances in which lend-lease equipment has played a part in the successes of our principal ally.

Our aid to Britain will continue to be substantial. With a population roughly one-third the size of ours, Britain is alone unable to maintain in the field so large an army fully equipped with modern equipment. Moreover, certain types of equipment can better be produced in this country than in Great Britain. Much thought and study has been given to the integration of our production and hers in order that, with a view to the limitations of shipping, manpower and raw materials, those items will be produced in each country which can best and most efficiently be produced there. For these and other reasons, we will continue to supply Great Britain with considerable quantities of munitions.

I have referred thus far only to those of our allies who are already actively fighting with us. But in Continental France, in Greece, in Belgium, in Norway and in other occupied and enslaved countries, there are many loyal fighting men who are waiting for the day when they can fight at our side. We want their help, and they need our arms in order to give us their help. 10% of our 1944 procurement program is destined to be used for this purpose. Whether that percentage is too low only the future can tell.

I said a moment ago that our procurement program for 1944 would be approximately equivalent to that of 1943. This does not mean that there will be no adjustments of individual items. On the contrary, there will be many, some of which we can now foresee, and some of which will arise unexpectedly and will cause us many headaches. For example, when we made our plans for 1944, we did not realize how successful would be the Russian push that is now driving the Nazis before it. But we have already begun to feel its impact in terms of shifting requirements. For example, the conquest of so vast a territory makes transportation more essential than ever to the Russians. She is asking for 50% more trucks in 1944 than she asked for in 1943. Also, whereas no locomotives were included in the last Protocol, hundreds are included in the current Protocol. At least on that front, locomotives have apparently become more important than tanks.

So much for our military program. Now for a few words about the civilian supplies such as food, clothing, medicine and fuel which we are providing for liberated areas.

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The reason why an invading army must carry such supplies with it is obvious. It is a military axiom that no front is safer than the civilian areas behind it. Hunger, pestilence, disease, a breakdown in local transportation--all of these represent a serious danger to military operations and must be avoided in all theaters in which our troops are engaged. Sound military strategy therefore demands that an invading army or occupying army prevent such conditions from arising within its lines.

The supply requirements for this purpose will be great. Our experience in Sicily and Italy, and the comments which appear daily in our newspapers, all attest to the thoroughness with which the Germans are attempting to destroy installations and supplies in order to aggrevate our supply problems and thus interfere with our operations. Let us, for example, take a look at Sicily--which is a mere pinprick on the map of Europe. To prevent starvation, disease and unrest in the first 90 days of our occupation more than 300 40-ton freight cars are required to transport necessary supplies.

Now let us turn from Sicily to Holland. Comparatively speaking, Holland is also a small country. Yet our estimates--which are the result of long study--indicate that Holland will need for a single month, 168,000 tons of coal, and food, besides other items.

Now Holland has a population of less than 9,000,000. The Western and Mediterranean areas of Europe have a combined population of nearly 80,000,000 including Holland. You can see from this what lies ahead of us in the future.

One word of explanation as to how we compute these requirements for liberated areas. It is not our intention to feed whole nations and to let them sit back comfortably while we sweat for them. Our ration figures are based upon a level of 2,000 calories per day. Moreover, we do not provide this ration for the entire population, but only for a percentage of the population. What percentage, depends in each case upon the level of supplies already available in the particular country, and upon the extent to which we estimate that that country will be devastated. The largest percentage of the population for which we provide supplies is 15%. In some cases, where the factual situation is different, we are making allowances of 5% and lower. Similarly, our requirements for fuel are based primarily upon military considerations, that is to say, the necessity of maintaining essential transportation and other facilities needed by our forces in their military operations, or needed to provide a basic standard of living consistent with military necessities. Needless to say, here as well as elsewhere, limitations of shipping must always be borne in mind.

We feel that both our military lend-lease program and our program for providing civilian supplies in liberated areas are based on sound considerations of military strategy and military necessity. To carry out those programs, and also to equip our own armed forces, will require every ounce of effort which we can muster.

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September 28, 1943

IMMEDIATE RELEASE

REPORT ON "LOGISTICS,"
DELIVERED BY
MAJOR GENERAL LEROY LUTES,
DIRECTOR OF OPERATIONS,
HEADQUARTERS, ARMY SERVICE FORCES,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR, AND NEWSPAPER LEADERS,
SEPTEMBER 28, 1943,
WASHINGTON, D. C.

You have been told a great deal about the type of military operations in which we are engaged. It is my job to tell you a few things about logistics—about the problems we face in supporting military operations in theaters all over the world. In a sense, these problems are problems in limitations. Ideally, of course, we should like to use every man in the Army and every possible piece of equipment against the enemy at one time. We can't do that. Beginning with the available supply here in this country, we have, as the first limiting factor in getting men and supplies overseas, the capacity of our ports to unload freight from trains and trucks and to load ships.

Among other important limiting factors is that of transport. We can't send more supplies overseas than we can carry. A further limitation is the number of naval escort vessels available for convoy duty. There is also the capacity of overseas ports to unload the ships that arrive there. We can't have ships just standing in a roadstead for weeks waiting for a berth, or for lighters. But even the capacity of the port to unload supplies may not be the ultimate limiting factor. The ultimate factor may be the capacity to clear supplies from the port area to depots and troops beyond. These are some of the problems we have to meet in supplying overseas operations.

When we see all these elements illustrated in terms of an integrated process, logistics becomes an abstraction, really just a way of visualizing the war. The scientific basis of logistics is admittedly real, but it is not the subject I want to talk to you about today.

Instead, I am interested in reminding you that getting the right supplies to the right places, even on a scale bigger than any ever before known to history, is still the same old headache you and your shipping departments have always struggled with. That is why I feel particularly comfortable in talking to this group about logistical operations. You are vitally engaged in producing the supplies by which the Army fights. And you will understand what I mean when I say that this thing we call logistics is actually just a composite of the thousands of details necessary in producing, selecting, loading, shipping, and unloading the tremendous quantities of materiel necessary to fight a modern war.

In one of the divisions of my office is a day-to-day record called "A Diary of a Certain Plan." When casting about for a way to illustrate the scope and complexity of our logistical requirements, I decided there was no better method than to select from this diary just a few of the details necessary to advance the "certain plan" by one step, the attack upon Sicily.

An amphibious attack like the one on Sicily requires many types of equipment which are not needed, in large quantities at least, to support the progress of armies over a fixed terrain. General Eisenhower had to have, for

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example, all kinds of waterproofing materials for his supplies; he had to have amphibious vehicles; and he had to have the communications equipment so vital in an over-water movement from an army's advanced bases.

On April 22nd, a radio requisition was received from North Africa for waterproofing kits for general purpose vehicles, light tanks, medium tanks, three-inch gun motor carriages, and 105mm. howitzer motor carriages. These materials had to be delivered to the ports in the United States by May 16th.

Well, we had just finished supplying the North African Theater with waterproofing kits—including metal aprons, front and back—for 4,700 general purpose vehicles and 550 medium tanks. When the new requisition came in, the Ordnance Department sent two men out to Detroit and they found that the only stocks already procured were waterproofing kits for 12,250 general purpose vehicles. The Philadelphia Procurement District was ordered to procure the balance of the stuff asked for. They did it, and got it to the ports by the date set.

The radiogram of April 22nd, we soon learned, was just a starter on General Eisenhower's waterproofing requirements. By June 4, additional requisitions called for 305,000 pounds of asbestos grease, 189,000 feet of 1-3/4 inch tubing, 189,500 feet of ¼ inch inside diameter soft wall steel tubing, 270,000 feet of 16 or 18 gage copper wire, and waterproofing kits for light tanks, medium tanks, and gun motor carriages.

We had the wire and the kits in stock; all the other stuff had to be procured and rushed to the port. But that wasn't all. When the first of the new requisitions came in, the particular type of asbestos grease mixture called for was not even in production; we had just received the specifications for it from England by means of an officer courier. Furthermore, we had already demanded such large quantities of the ¼ inch tubing that we now had to go to WPB on the priorities.

Nevertheless, the stuff was shipped on time, after we got the priorities, and after the asbestos grease was put into production in large quantities overnight. The margin was close: To meet the deadline on the last of these requisitions, 50,000 pounds of grease had to be flown into La Guardia Field from Pittsburgh.

Any large-scale amphibious operation depends heavily upon communications, and our signal supply men were simply blitzed this past spring with requisitions from General Eisenhower for the attack on Sicily. For other reasons, this flood of requisitions was beyond all previous estimates, even for an over-water operation. First of all, as the Tunisian campaign developed, they had to carry the communications system in Africa farther to the East than originally planned. Also, the very excellence of U. S. made signal equipment had brought urgent requisitions on General Eisenhower from our British and French Allies for radios, mine detectors, and so on. Consequently, when General Eisenhower began requisitioning more signal supplies in April and May, the quantities needed were far beyond what the Army Supply Program had estimated.

Because of the British and French demands, and the demands for replacement, we don't know just exactly how much of the signal equipment shipped to Eisenhower in April, May, and June was used in Sicily. But we do know, for example, that mine detectors were urgently needed for the invasion. We had, indeed, to fly them by air to North Africa, in order to meet deadlines.

We furnished radio sets just prior to the Sicilian attack. We postponed the fulfillment of some demands for training requirements in the Continental United States, though we did not pull back any sets already in the hands of troops. We had to round up a number of the 17,000-pound, truck-and-trailer-mounted radios—the basic signal equipment for infantry and motorized divisions.

The same kind of expediting of equipment was necessary to ship a quantity of the little 5¼ pound handy-talkies and several hundred larger sets, 100 of which were to be lent to the Navy for the combined operations. And in addition to all the mine detectors and radio sets were tremendous quantities of telephones, switchboards, wire, pole and line hardware, and teletype equipment.

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Waterproofing materials and communications equipment are examples of requirements which are shaped and altered by a new operation in a particular theater. There are other types of equipment, however, which grow directly out of logistics—the equipment needed to enlarge port facilities and keep the stuff funnelling into the troops.

On May 28, we shipped 16,510 ship tons of Engineer items to meet just one requisition from General Eisenhower for the Sicilian campaign; we had just two weeks to get the materials to the ports. The 156 items on this requisition are symbols of the logistical war in which we are engaged: Port cranes, fireaxes, air compressors, lighting equipment, derricks, pumps, structural steel, welding rods, wiring, tractors, trucks, trailers, dollies, cargo booms, cargo hooks, jacks, cargo nets, slings, cargo lifts. To be sure that the deadline was met at the port, officers rode the freight trains, from the Engineer Supply Depots, reporting their location to Washington every night.

These details are illustrative of what logistical operations mean at rock-bottom. They mean the thousands of details which must be checked and rechecked constantly—getting the rush orders into the factories, your own sudden spurts of production to meet them, getting the stuff on the railroads and into the ports, pulling things out of one place to make room for others, and all the time our Stock Control men attempting to keep their fingers on where the stuff is, tracing it from factories and depots all over the country to the ports of embarkation.

When we get the supplies to the ports, moreover, we have only begun to meet our logistical needs. First of all, I am glad to remind you that one limitation in our planning is each day becoming less and less serious. At the time of Pearl Harbor we didn't have many cargo ships and the United Nations had suffered more than two years of continued loss much greater than they could replace. Losses are now negligible, and ship construction is expanding our shipping capacity every month. We have had net gains continuously since August, 1942. Losses have been going down since March, 1943. Our total cargo capacity has expanded steadily since November, 1942, an increase of more than 200 per cent as of August 31, 1943. Our total troop carrying capacity had been increased by more than 150 per cent on August 31, compared with November, 1942.

Rather than shipping limitations, our problems are now overseas port unloading capacity and port clearance capacity. Suppose we have transported 500,000 men into a particular area such as North Africa and not all initial requirements. Just to keep that force of 500,000 men supplied with the food, with necessary replacements of fighting equipment, with fuel, with gas and oil, with medical supplies, with motor maintenance, with construction and transportation equipment, and with ammunition, requires 750,000 ship tons a month. That is equivalent to the full loading of 68 Liberty ships.

To support a force of 500,000 men, the final need, then, is for port facilities capable of unloading 68 or more vessels every month. In the early phases of an operation, when troops are going ashore with their organizational equipment, a much higher port capacity is required. If this is not available, troops must take their equipment ashore over the beaches—as they did in Sicily—or must go ashore without much of their heavy equipment and transportation—as they did in North Africa. In the North African operation the American forces were allotted two ports, with an estimated capacity of about 40 cargo ships a month. Thus our first real job, and one that could not be delayed, was to enlarge port capacities by some 28 ships a month if we were to support a force of 500,000 men.

But when a port is conquered today, the Army faces no such simple task as merely enlarging its existing capacity to that required to maintain projected military operations. Even if a port is not damaged by our own assault, we can scarcely expect the enemy as he retires to leave any port installations intact for our own use. At Casablanca, for example, where at best there was little more than a half-hearted resistance to our attack,

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less than one-quarter of the port installations were usable by our forces after the firing ceased. It was necessary to remove sunken ships in the harbor, to replace docks, to replace damaged machinery, and to bridge over ships sunk in their berths. Construction equipment, heavy cranes, port sheds, railroad equipment, and other supplies were needed just to restore the existing port, even before we could begin to plan its necessary enlargement. And yet, the destruction at Casablanca was inconsequential if compared to what happened at Bizerte and, more recently, at Naples.

Think how different this is from the conditions which we faced in the last war. The well-developed ports of France, primarily along the Bay of Biscay, were readily available to us for the unloading of our supplies. No port reconstruction was necessary and only one major enlargement, near Bordeaux, was required. Supplies were unloaded and shipped over the French railways in a relatively peaceful and quiet atmosphere. There were no hostile aircraft overhead and no enemy guns commanding the hills beyond the port. We face no such conditions in this war either in Europe or in Asia.

But when we get supplies to their destination, we are not through. There must be adequate warehouse space; a force of 500,000 men would require 4 million square feet of open storage space and 3½ million square feet of covered storage space. There must be adequate railways and highways to move supplies from the port area to the fighting lines. As our forces advance in Europe, we shall undoubtedly find that railroad rolling stock and railroad lines have largely been destroyed. Our estimates of requirements of rolling stock just for the initial task force that landed at Casablanca included 187 locomotives, 1,200 box cars, 1,000 flatcars, 650 gondolas, and 200 tank cars. And we were fortunate in obtaining most of the rolling stock of the Moroccan railways with little damage done to them, together with new ties, new rails, new signal equipment, and all the other railway needs. Since the highways in North Africa were in relatively good shape, only a small amount of new road construction was necessary. Under different circumstances it will undoubtedly be necessary to construct entirely new roads. And that will mean construction equipment and construction supplies in great quantities.

Our logistical problems have been illustrated by reference only to North Africa and Sicily. Time does not permit adequate discussion of the even more complex problems we face in the Pacific, but we should leave you with a very unrealistic picture of our supply operations if we did not touch upon the Pacific situation briefly.

In contrast to North Africa, the great problem in the South and Southwest Pacific was to get supplies ashore by lighters where no ports existed. Even when we could get piers built to speed up the unloading, they could take only one or two Liberty ships. This was true at New Caledonia, very early in the war; it was true at Guadalcanal; it is still true today. In this work, I need not add, the Navy Seabees have had a most important share.

You can gain a vivid impression of the handicaps offered by primitive or non-existent ports if you consider 95 per cent of all supply and troop movements in the region north and east of Australia must be made by water. Moreover, the supplies sent in deep-water ships from Australia to New Guinea and other islands must then be trans-shipped on vessels of from 100 to 300 feet in length, of shallow draught, and sometimes even on trawlers.

Items in heavy demand in the South and Southwest Pacific thus are bulldozers, barges, lumber, tractors, portable saw-mills, dredges, pipelines, and other similar materials for construction ports, roads, airfields, and camps. Since no power facilities were to be had in the islands, we have also had to supply generators of every conceivable size and type; also well digging equipment, water stills, etc.

The Pacific area presents a further logistical problem through its climate and the particular nature of its jungle terrain. Not only do we have demands for tropical clothing, medicines, insecticides, refrigeration and other special supplies in large quantities, but we must allow for the worst kind of wear and loss on every piece of equipment we send into action.

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I have not been able to touch on all our logistical problems. I have said nothing about the job of stockpiling vast quantities of supplies in spots close to expected future operations, nor about the particular service troops--depot companies, automotive companies, port companies, and others--which must furnish wherever we handle supplies. But I think I have made it clear that in each European or Asiatic campaign, with its own peculiar requirements, our logistical needs will be very large. If it were always possible to dismantle the facilities we install in one theater and move them bodily to another, those needs could be curtailed. But it is not. The facilities for supporting our global operations in 1944 must come largely from American production.

END

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IMMEDIATE RELEASE

EXCERPTS FROM REPORT ON "REQUIREMENTS"
DELIVERED BY
COLONEL LEE A. DENSON, JR., G.S.C.,
ACTING DIRECTOR, REQUIREMENTS DIVISION,
HEADQUARTERS, ARMY SERVICE FORCES,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR AND NEWSPAPER LEADERS,
SEPTEMBER 28, 1943,
WASHINGTON, D. C.

Let us examine first the plan under which the War Department decides just how many of what materials and supplies it needs, and how we arrive at these figures. Planning is continuous. Certain officers, many of them brought into the Army from your own companies, meet constantly with other officers who devote their energies to strategy. These groups jointly work out our requirements.

The strategistsdecide the number andtypes of military units needed for the actions they are planning; the production men list the amount of equipment available from industry for these units. Then they compromise; they shift battle plans to fit output and production plans to make available the most needed items.

When the results are totaled, a master plan is made up of everything the Army needs. This plan is called the Army Supply Program. It is a long-range program, projected two years in advance and recomputed every six months.

The Army Supply Program for Ground Forces alone this year totals approximately 21 billion dollars. Our plans for next year call for 22 billion dollars — plus any carry-over not produced this year.

In February 1942 we first laid the ground work for the 1943 Program. It subsequently became apparent that we could not get all the equipment we wanted. There weren't enough production facilities or raw materials. Between February and September our initial estimate was reduced 15 billion dollars. In October 1942 the Joint Chiefs of Staff decided to divert part of the limited supply of raw materials to accelerate the production of planes and escort ships. This compelled us to decrease our Ground Program. This was accomplished by changing the composition of the Ground Forces of the Army.

So far I have talked about the initial equipment necessary to activate troops for combat. But war is a destructive business. Each time our men go into action, immense quantities are needed for replacement. For example, when we send 100 men overseas with 100 rifles, we have to ship 60 extra rifles each year to replace those that will be lost or damaged. For every 100 machine guns we must send 84 additional ones for each year of combat. Since our plans call for almost twice as many men overseas in December 1944 as will have been shipped this December our requirements will expand tremendously. The Sicilian campaign gives us an idea of what to expect in battle casualties to equipment.

In Sicily we lost 13 percent of our big 155-mm howitzers. In that month we lost 36 out of each 100 motor carriages for our 75-mm howitzers. Forty-six percent of our 57-mm guns were knocked out and for a certain gun mount the loss rate was 54 percent. And remember that this was only a minor campaign, fought against a mixed German and Italian army and that the Italians even then were ready to quit. It lasted only 30 days. Multiply it by a year; multiply it by the added millions of men we will have in action; multiply it by the picked

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German divisions we have not yet met; multiply it by Japanese fanaticism; the product spells continued mass production.

Another important element of requirements is what we term "distribution". It is the quantity necessary to insure a constant flow of supplies from the factory to the field. For each 12 men overseas, 100 tons must be provided as distribution. Of each 100 tons, 29% is in filler depots, 6% in ports, 18% in transit, 29% in contingency theater reserves, and 18% in theater operating reserves. Material required for distribution must keep pace with expanding overseas strengths.

There is still another factor to be provided. We call it a "strategic reserve". It is to be created in 1944 and is the equivalent of the initial issue requirements for 20% of the maximum strength of the Army in 1943. One-half of this reserve is intended to re-arm fighting units in liberated countries whom we expect to join our ranks as the battle lines move closer to Germany. The other one-half is a reserve for American Forces to enable them to exploit successes or offset reverses in field operations.

Finally, we must cope with the unpredictable. We can't know exactly what Hitler and Tojo will do. We make the best estimates and plans that we can, based on all the information we can get. There are bound to be changes, however The enemy develops new weapons or tactics that we must meet quickly. Overnight, a tank or gun becomes obsolete. You agree, I know, that it would be ridiculous to continue to make that gun or tank, no matter whose production schedule a cancellation would affect. It has been said that we constantly change models. Of course we do! There is only one proving ground for armaments and that is the battle field. There only can we find what equipment is standing up and what is not. And as long as we are at war we must depend on that proving ground.

Time does not permit a discussion of the revolutionary developments created by the genius of American industry. They are literally legion in number. Typical of these is the new 2½-ton amphibian truck that soldiers call the "duck". When they went into action we discovered that we had underestimated their worth.

That is why we have ordered thousands more of these ducks for delivery at the earliest possible moment.

Let me summarize briefly. The war is expanding. The biggest battles are still ahead. We must complete the equipment of our Army and maintain it through these battles. We will have almost twice as many men overseas at the end of the new year as we will have this December. They will need much additional equipment. A number of weapons planned in 1942 are obsolete today. Weapons we plan today may be obsolete tomorrow. War is fluid and war is destructive. Battle shapes our plans. The only constant factor in total war is the urgency of getting the job done.

END

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September 28, 1943

IMMEDIATE RELEASE

REMARKS BY:
MR. CHARLES E. WILSON,
EXECUTIVE VICE CHAIRMAN,
WAR PRODUCTION BOARD,
BEFORE WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR, AND NEWSPAPER LEADERS,
SEPTEMBER 28, 1943,
FORT BELVOIR, VIRGINIA

Mr. Patterson very graciously invited me to speak at this luncheon. I agreed. When I went back to the outline of what I might say to you, I commenced to appreciate the difficulty of the assignment given me.

It suddenly occurred to me, talking to you about production after almost two days in which you have been given an insight into the exciting field of military strategy in which the need for the machines of war has been put before you by the men using then, might be as much of an anticlimax as a display of mild civilian fireworks after a front line view of the finest and best equipped army in the world.

Nevertheless, the planning and supervision of war production is our job and actual performance of war production is your job. Here then, but for a series of circumstances, anyone of you might be talking now from this wide table and I, if I had been born under a luckier star, might be listening from the other side.

So in planning what I might say, I asked myself what I would wish to be told by a fellow production man if I had been sitting where you are.

I decided I would not want to listen to another speech exhorting greater production, however inspirational such a talk might be.

I would want it taken for grented that I was ready to do anything in my power needed to assure me that the least possible delay in victory for my country and for our lives existed.

So I shall not make an oratorical speech. It seems to me I would wish to be told three things as clearly and as frankly as they could be phrased for me.

First, how good is the production job that has been done to date. Secondly, what is the dimension of the job ahead of us? Is it greater or less than we are doing now? Thirdly, has the program had any special characteristics which, if understood and anticipated, would enable us to be more effective in the performance of what is expected of us?

Now, to these three questions. First, what of the production job that has been done. Let no one tell you the record of war production in the United States is anything less than spectacular. Those of us who are immersed in it up to our chins can find any number of weak spots, losses and ineptitudes, but the record as a whole is one which you and the nation legitimately may be proud of.

Let us take a look at the record, first in comparison with what has been done by others and then upon its own intrinsic merit.

In 1940, the year upon which we embarked on our so-called defense program, we mobilized a paltry 3% of our economic resources for war aims.

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All our allies and enemies were commiting 20% to more than 40% of their respective resources to war expenditures. In the current year 1943, we shall be spending almost half of our resources for war aims, a record which will be surpassed only by Russia and Germany.

We have sacrificed much less of our civilian living standards than any one of the major belligerants, largely because we have maintained for war production the higher standards of production efficiency that applied to our pre-war economy. Measured by output per worker employed in the manufacture of combat munitions, we are outstripping Canada by 50%, Great Britain and Germany by 100%, and Japan by some 300% - 400%.

But wars are won neither by relative sacrifices nor efforts. The one thing that counts production-wise is the absolute amount of planes, greater army munitions, and naval ships and equipment that can be rolled into the combat.

In 1941 Germany, Italy and Japan combined turned out almost five times as much munitions as did the United States. In 1943, we alone have turned out almost twice as much as the combined Axis total. Next year we alone shall certainly turn out well over twice as much.

Foregoing further comparisons and looking directly at our war production record, the first two of several charts which I have here will help you get a picture of how much of a job we have done.

You remember the production for our defense program. It began to get under way in the middle of 1940. The third quarter of 1940 we turned out materiel of war at the rate of a few billion dollars a year. The time elapsed between June 1940 and Pearl Harbor was just about the same as the period of participation in the first World War. As you may recall, it was pointed out at that time, we had raised our war production to just about the same level as had been reached in the old World War in Nov. 1918.

It was argued by some that this was not a bad record in view of the fact it was achieved at a time when we were not formally at war.

These utter inadequacies of what was needed in the present conflict was driven home when the events of December 7, loomed up upon us, new demands of war preparation.

From a quarterly three billions at the end of 1941 munitions was pushed up to twelve billions in the forequarter of last year. In the current third quarter of 1943, we have exceeded 16 billion. We did not have the plants in this country to turn out anything like this amount of munitions when the war production program began or even at the time of Pearl Harbor.

We had to construct new facilities, convert, retool existing facilities. We also had to construct bases for the airfields, army and navy, build housing and other facilities for our troops and war workers. So on top of this program of production of munitions, we had a program of construction which to date has been about 1/3 as large as our total munitions output over the whole period of time from July 1940 through to the current month.

At that time it was almost half as large as munitions output. Now we are adequately equipped with most of the facilities of construction for currently less than 1/7th of the total and forming rapidly in proportion and dollar value. It is munitions with which we equip the fighting forces.

Summarizing the picture for the munitions output in 1942 and 1943, 34 billion of munitions were completed in 1942. The current 63 billion is almost double last year's production. The current quarter rate of munitions output ascends to 65 billion per year. It will be higher than that for the last month of the quarter.

So you see you are still being called upon for increased total output despite the fact that here and there particular items are being cut down from previous levels or eliminated entirely. A rate of 75 billion a year is a good deal more than you are now getting.

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Its accomplishment will call for the combined efforts of all of us. This carries us a full step into the section with which I started to deal, the dimension of the job that is ahead of us.

Hand in hand with this picture, could be justified in conclusion, once this year's goal was achieved, 1944 program would itself be more or less automatic. I am convinced the 1944 production job will present problems quite as difficult as any we have faced or will face in 1943.

I outline the topic this places before you, special characteristics of the 1944 program that present problems which must be anticipated, understood and dealt with effectively.

I next present a type of problem with which we shall be faced. This is "combat munitions" which means merely we have eliminated from the 1943 and 1944 balances at which you have been looking about 10 billion of miscellaneous equipment, clothing, tentage, medical supplies and a variety of items, most of which present no formidable production problem.

The big increase is in aircraft and in related munitions particularly bombs. The aircraft program will continue to expand and next year's total ought to be more than 50% higher than the 1943 accomplishment. The increase for the aircraft program will of course not be so large compared with the 4th quarter, 1943 rate. But even this step up will call for a gigantic effort. Here you have production patterns for combat munitions in 1944.

From the rates which are anticipated for the next quarter for the three general categories presented we have the problem of cutting one group back, holding the second level and drastically increasing the third.

Whether this is a harder task than pushing everything to still higher levels is debatable. Certainly it is a more difficult assignment for people to understand. This is only half the story.

In the aircraft program for example, the tough job is not just to get increased volume. This would be relatively easy. If we just wanted a maximum number of airplanes, that could be produced. What is hard is to get not increased volume, but new and improved models needed to destroy the enemy and save the lives of our own crews.

Those of you who have been producing for the aircraft program know we always have to make changes,some small and some big, on the models which you are producing. We often have to run out schedules on one model while we arrange to produce a new model. Changes are made on the basis of battle experience and the tactical plans of the strategy staff. They impose difficulties on the production line. Through them we can make the task of our fighting forces easier.

This problem of changeovers on the production lines is not limited to the aircraft program. It is general. The major problem is to get increased volume so that there will be enough equipment for our armed forces, more of almost everything in production was needed. We are entering the difficult period when we must maintain the overall volume and still get the particular things that are needed for the military operations ahead, the particular things that will best serve the armed forces. In the great field of greater army munitions, we are approaching the end of production of capital equipment and are embarking upon a program based largely on the needs of operational supplies.

Total army supply program for 1944 is only a little higher than 1943 total and considerably lower than the annual rate of production we shall get in the last quarter of the current year.

The general picture for the army supply program is clear. The total volume remains staple. Even in a program like tanks and artillery with declining output overall and some of these are already on reduced schedule for the remainder of 1943, output of particular models will have to be increased while others fall off or disappear from the production program completely.

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In these items for which production must be expanded in 1944, requirements will in fact be considerably higher than the peak rate we will have attained this year.

It will be higher by more than 1/4 as the program now stands. Additional changes by way of improved or new models should be expected as we bring more and more of our battle experience and development work to bear on the production line.

Sometimes these changes mean contracts have to be modified and schedules run out. Always they mean facilities have to be arranged so that our program and production lines will be geared to serve the changes needed in the war.

I have painted for you the production picture as I see it. A great job has been done, a greater job still lies ahead. For the first time since we started on the long pull in June 1943, we are in sight of our overall peaks. They are well within the limits of our uniquely large resources. But as is characteristic of all war economies as they approach maturity, we must shift from the production of original capital equipment to maintain an operation of supply and other replacement of obsolete types. This will entail drastic and difficult shifts in our production, pattern slowing down, shutting down certain facilities while we are still urging you on to even greater production efforts. We can succeed only if the necessity for such revision is understood. If it is recognized, a similar large scale readjustment has been made by every other major belligerent in the war.

If it is not understood, there will be charges of confusion, general discontent, and production failing at the very time when we have within our reach an epoch making success, the very time when our efforts in mine and mill and factory promise to bear the sweet fruit of victory against our enemies in the field.

Necessary production changes cannot be made painlessly. They will hurt business and labor. We have to do our best here to pattern them intelligently both in the interest of wartime production, efficiency, and with a view of the readjustment to the economy of peace when that becomes possible. But the success of our ventures depends upon your will to cooperate and your intelligent understanding. As I meet here with you and look at your past performance, I have full confidence in how the record will look when the books are closed.

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September 28, 1943

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INTRODUCTORY REMARKS
TO "PRODUCTION" SYMPOSIUM,
PREPARED BY BRIGADIER GENERAL HUGH C. MINTON, DIRECTOR,
PRODUCTION DIVISION, HEADQUARTERS, A.S.F.,
AND DELIVERED BY
COLONEL F. R. DENTON, ASSISTANT DIRECTOR FOR PRODUCTION, A.S.F.,
AT WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR AND NEWSPAPER LEADERS,
SEPTEMBER 28, 1943,
WASHINGTON, D. C.

In terms of production needs of the Army Service Forces, 1944 must bring forth a greater effort than 1943. During this year, Army Supply Program deliveries to all Technical Services of the Army Service Forces are expected to total 21 billion dollars. In 1944, American industry must deliver to the Army Service Forces 22 billion dollars worth of materiel, an increase of a billion dollars. The average production for 1944 must be in line with third-quarter 1943 production. We all know with what difficulties schedules for that period have been met. There is some doubt at this moment whether actual deliveries of all the thousands of items that make up the Army Supply Program will reach the totals that were set for this present year. For the month of August, total deliveries against the Army Supply Program amounted to $1,460,000,000. In the four months for the remainder of the year deliveries will have to average $1,670,000,000, if we are to meet the military requirements of the year 1943. If we fail to meet 1943 requirements, the carry-over will have to be added to the procurement program for 1944.

There is, of course, little uniformity among programs. Production requirements change with the rapidly developing strategic situation. We hope, for example, that there will be no more desert warfare so that the hundreds of items which had to be produced in a hurry for this type of fighting are no longer necessary. Each new type of terrain on which we fight calls for different kinds of weapons and equipment. One program many thus be going up while another is going down. But in general the trend for 1944 is definitely upward.

Accepting this fact, we must yet point out at once that no such vast and complex procurement program as the one we have established can ever remain static. Our requirements are constantly being screened. Every month, every week, sometimes almost every day, a new balance is being struck, with the requirements for one item or a whole group of items being scaled down while others are raised. Each section of the Army Supply Program is reprinted every six months, incorporating the revisions which have developed.

This constant screening of our requirements is performed in the light of certain tangible but shifting factors: New battle experiences with their consequent changes in strategy leading to the discarding of some models and increasing demands for others; changes in troop strength; abnormal wear and tear on equipment requiring increased stocks of spare parts and maintenance materials; variations in the performance of particular munitions items when they are battle-tested under unforeseen conditions. All these factors are being reported upon daily by overseas representatives of the seven technical services, and they form the basis of our constant reappraisal. Finally, on top of this screening, is the screening which proceeds from the variables and imponderables in the requirements of our Allies through International Aid. The fluidity of modern war must be matched--and is matched--by a flexibility

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in our estimated requirements.

In order for you to have a more detailed picture of our production needs, a representative of each technical service will give you his Procurement program for 1944. We have selected only the most important items for detailed analysis.

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ORDNANCE DEPARTMENT

Brigadier General Hermon F. Safford,
Chief, Production Service Branch, Industrial Division,
Office of the Chief of Ordnance.

Our procurement plan for this year called for deliveries totaling $11,720,000,000. Next year's plan calls for $12,675,000,000. That's up almost a billion. We must add to that certain items in which we fall behind this year.

Our August deliveries were under $1,000,000,000. We'll have to top ~~$100,000,000~~ $1,000,000,000 each remaining month to attain our 1943 goal. We must step up our production accordingly.

We must step up delivery of small arms ammunition to break even with our plan by the year's end.

Carbine production is still short of our goals. We will have to push our facilities to attain the production forecasts.

The production rate for artillery and mortar ammunition in 1944 must be at a greatly increased rate for the first nine months this year. In the meantime, more brass strip from the small arms program has been allotted to the artillery cartridge case program.

Next year's requirements for bombs, mines, grenades and pyrotechnics are tremendous. For certain special missions the Air Forces find that certain types of bombs do a better job than the kind they've been using. This heavy demand brought about by new combat methods presents a tough problem for next year.

The problem with tanks isn't going to be to attain a high goal. There will be some shortages to make up from this year. The real problem here is brought about by the necessity to convert production quickly to new types.

Some requirements in combat cars and carriers will have to be carried over into next year's production. We also will have to strive diligently to produce the total number of trucks that we're going to need. It is possible, too, that the goals may be stepped up on the basis of statistics from Italy and other fronts. Like everything else in war, the present plan may need to be shifted on very short notice.

We must continue to give special attention to the supply of spare parts during the coming year.

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SIGNAL CORPS

Brigadier General John R. Gardner,
Assistant Chief, Procurement and Distribution Service,
Office of the Chief Signal Officer

Since September, 1941, the Signal Corps has ordered $7,000,000,000 of radio, telephone, wire and other communications equipment.

In 1943, deliveries of Signal equipment must total $3,250,000,000, about two and one-half times the 1942 production. In 1944, we must produce $4,500,000,000 of materiel—one-third more than in 1943. From now on, monthly production must exceed 12 times that of the entire prewar radio industry.

MORE

In 1944, the volume of all Air Forces Signal equipment will be approximately two-thirds greater than in 1943. Intensive effort will be necessary to meet the 100 per cent increased requirements for 1944.

Ground radio, wire communications and miscellaneous equipment programs are equally important, although somewhat more stabilized. Production will have to continue at peak 1943 production rates in these categories.

The next year and a quarter will be strenuous for ourselves and our 5,000 contractors. However, schedules must be met in spite of shortages of manpower, engineering ability, and rapidly changing military requirements.

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MEDICAL DEPARTMENT

Lieutenant Colonel Ralph R. Patch, Sanitary Corps,
Chief, Production and Facilities Branch,
Office of The Surgeon General.

The Medical Department's Procurement plan for 1943 calls for the purchase of $449,000,000 worth of material in all classifications such as drugs, chemicals, surgical instruments, field equipment, hospital equipment, etc. With this material added to that bought prior to 1943, it will be possible to step-down our 1944 buying to a total of $353,000,000. Although an overall decrease of $96,000,000 is shown, the need for drugs, chemicals and biologicals will be greater next year than it has been this year. During the current year our biggest quarter on drugs and chemicals was $23,000,000. To meet our 1944 program on these same items, we will have to maintain a quarterly average of $25,000,000, and this means an accelerated buying pace. Even a better illustration of the increased need for drugs in 1944 is provided by the figures on gas gangrene, with 1943 requirements set at $2,250,000 and 1944 needs just about doubled at $4,250,000. More fighting means more casualties and that brings us to blood plasma, with 2,700,000 units in 1943. In anticipation of new blows against the Japs and Nazis, the Medical Department must have 3,250,000 blood plasma units in 1944, a jump of more than half a million units over the present year.

Penicillin, the wonder drug, heretofore produced laboriously and slowly, will reach volume production in 1944 as several new laboratories swing into action. We expect to get 125,000 to 200,000 ampoules in 1943. In 1944 we must get at least ten times that quantity.

In the equipment and appliances fields, there will be a sharp drop in buying. During 1943 the Department expects to procure $15,000,000 worth of X-Ray equipment, but the next year we will need only $8,250,000 worth. This same reduced ratio is maintained in the case of surgical appliances, with the 1943 figure at $31,000,000 and the 1944 figure cut to $15,300,000. Our surgical dressing needs dip from $22,000,000 in 1943 to $17,700,000 in 1944.

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QUARTERMASTER CORPS

Lieutenant Colonel Robert B. McKinley, Quartermaster Corps,
Chief, Production Services Branch, Procurement Division,
Office of The Quartermaster General.

Our service procures, stores and distributes the Army's food, clothing and equipage—some 70,000 items needed to keep fighting men in fighting condition. This year we'll spend about $5,000,000,000 for these items.

Our procurement plan calls for a number of reductions in 1944, and some increases. Here are some examples.

Equipage—items of individual equipment used by the soldier. From over $200,000,000 worth in the first quarter of 1943, deliveries of equipage will continue to scale down until they are expected to reach $75,000,000 in the

MORE

second quarter of 1944.

In general supplies, covering a wide variety of items, there will be a step-up from just over $20,000,000 worth delivered in the second quarter of 1943 to $40,000,000 worth in the first quarter of next year.

Clothing represents another decrease in procurement for the individual as the rate of induction of men into the Army levels off. From nearly $350,000,000 worth in the first quarter of this year clothing deliveries will be reduced by about half by the second quarter of 1944.

Shortages in available items exist too.

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CORPS OF ENGINEERS

Colonel Harry A. Montgomery, Corps of Engineers,
Executive Officer, Supply Division,
Office of The Chief of Engineers.

Next year we're going to call for $825,000,000 worth of equipment. That's just 6 per cent under 1943. The rest of this year we must step up deliveries considerably to meet our objective. We may reach it and we may fall a little behind.

In some categories, however, we're expanding next year. August deliveries of construction equipment ran to $18,000,000, and we'll have to reach $20,000,000 a month this year to meet our objective. We've been getting more production each successive quarter this year and next year this high production will have to be maintained to meet our needs.

On the tractor situation substantial expansion is planned. They are used for jungle fighting as well as construction work now. In the first quarter we hope to double our 1943 maximum quarterly output. New facilities to do this are now being brought into action.

In the case of landing mats, shortages slowed our program during the first half of this year. The program is still enormous and we want a lot the first quarter. We're averaging now about $18,000,000 worth each quarter and next year we hope to average $20,000,000.

A shortage of Engineer construction equipment, tractors, cranes, and freight handling equipment would be disastrous since without them supplies could not be moved into or handled by the Theaters of Operation.

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CHEMICAL WARFARE SERVICE

Colonel Harry A. Kuhn, Chemical Warfare Service,
Chief, Control Division,
Chemical Warfare Service.

The picture for 1944 in our field can be divided into two main groups.

The main part of our program at the moment concerns protective material and service equipment, smoke and incendiary munition and bombs. Our requirements this year for incendiary bombs and smoke material have increased constantly, and our production next year must more than double this year's requirements. We have the productive capacity in sight. Our production of these bombs will reach a peak about November and continue at a peak through the first quarter of 1944.

We know how difficult this peak in the first three months will be. Like you, we'd rather spread out through the whole year. But our strategic plans require us to get the material at the first possible minute and to get it in sufficient quantity.

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Although we expect procurement to drop off a little after the first quarter, the total demand for the year in this field will be slightly higher than for 1943.

The second part of our program concerns Chemical Warfare chemicals. Thanks to the cooperation of the chemical industry, we will be in an excellent condition if this phase of warfare is instituted by the enemy.

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TRANSPORTATION CORPS

Lieutenant Colonel James C. Waddell, Transportation Corps,
Chief, Requirements Division,
Office of the Assistant Chief of Transportation for Supply.

The Army Transportation Corps hustles war material from the factory door to the overseas commands. There it turns the material over to the Commanding General and comes back for more. To date it has transported in excess of 20,000,000 tons of cargo and 2,000,000 men. The equipment needed for the tremendous transportation job for 1944, already described, from rowboats to locomotives, costs $1,095,000,000. Although production and procurement are moving faster than ever before, we are slightly behind Army Supply Program requirements for both rail and marine equipment, due to the urgency and volume of demands.

Rail production for the last half of 1943 has declined. Not that we didn't need more. We just couldn't get it. The rise in requirements of both rail and marine over 1943 is 65 per cent. There are no cut-backs or turn-arounds, except those that the equipment takes for a new load of supplies for the front. This is a billion dollar business done by our organization, less than two years old.

END

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WAR DEPARTMENT
Bureau of Public Relations
PRESS BRANCH
Tel. - RE 6700
Brs. 3425 and 4860

September 28, 1943

IMMEDIATE RELEASE

REMARKS BY
THE HONORABLE JAMES F. BYRNES,
DIRECTOR, OFFICE OF WAR MOBILIZATION,
BEFORE WAR DEPARTMENT CONFERENCE
OF INDUSTRY, LABOR, AND NEWSPAPER LEADERS,
SEPTEMBER 28, 1943,
FORT BELVOIR, VIRGINIA.

Almost daily I have occasion to invite the heads of the War Agencies to confer as to some problems affecting more than one agency, and it is comforting for me to know--and I am sure it will be comforting for you to know--that there is closer cooperation between the War Agencies of this Government than at any time since last October when I left the Supreme Court.

As one learns daily of the success of our armies in Italy, or New Guinea, of the air raids over Germany, he is apt to be deceived as to the course of the war. I am therefore delighted that you have had the opportunity to learn the opinions of those officers of the Army and Navy who are responsible for the conduct of the war.

Some weeks ago I learned their opinion. I concluded then, notwithstanding the elimination of Italy, there was no justification or excuse for the prevalent belief in this country in the unconditional surrender by the Axis powers in the near future. It was clear to me that Germany could not now win the war and that Japan could not win the war, but it was not clear to me that we are now as near winning as the Germans were in the summer of 1940 or the Japs were immediately after Pearl Harbor.

The heroes of Bataan are still prisoners of the Japs. No full scale offensive against Japan has commenced. No Allied Army has crossed the borders of Germany.

In 1918 we were a long way from Chateau-Thierry to the Rhine, and we today are still far from Chateau-Thierry. At Salerno, Naples, we have suffered severe casualties. We have no reason to believe that we will not be forced to fight for every foot of ground we gain. The roads to Berlin and Tokio are still long, hard and bloody. Our over-confidence has been based in great measure upon the belief that because Italy lacked the will to fight, Germany would also lack that will, but there is nothing to justify that hope. It is expected simply because in the fall of 1918 the morale of the German people was destroyed, but we cannot count on this happening now simply because it happened in 1918.

In Mein Kampf, Hitler paid tribute to the Allied propagandists for their part in destroying German morale in 1918, but in that book he promised that never again would it occur, that no longer could one arouse the prejudices of the people of Southern Germany against the Prussians, or the resentment of the working people against the military clique; that the Nazi Party would guarantee unity in time of war.

To accomplish it he did many things. I recall visiting the boys' camps and being told by the officer of the Army in charge of those camps that the boys from Southern Germany were purposely caused to bunk alongside the boys from Prussia in order to bring about the unity in Germany that Hitler believed essential for its defense in the future.

Today we look for dissension in Germany. Well, if we are, we must admit we see little evidence of it. They suffer from raids, but time and again the German people have proved they can take it. The British proved they could take

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it in 1940 and you and I know there will be held before the German people the example of the British holding out against superior force until at last the tide of war changed.

We must also admit that even without resorting to untruth, Goebbels could picture to the German people evidence of dissension in our own country which would give courage and hope to the Nazis. Because this is true, it is our solemn duty to do everything in our power to avoid giving the Nazis any justification for nursing the hope that our morale will break first or that the desire to return to a normal life will cause us to lessen for one moment our preparations to deliver the knockout blow.

The road ahead may be shortened or lengthened by factors not strictly military. It may be shortened by a deterioration in the enemy's will to fight. It may be lengthened by our weakening of our own will to fight. Our enemies are likely to lose the will to fight when it becomes clear to them that they cannot stave off complete and unconditional defeat.

Britain, in her darkest hours, was sustained by the hope that a light still gleamed at the end of a long tunnel; that somehow and some way help would come from the West.

Germany and Japan are clinging desperately to the hope that our will to fight will slacken. They watch anxiously for signs of division among the United Nations and for divisions within America which will weaken our will to fight. Every sign of dissension they can discover or can make between us and our Allies, every sign of dissension they can find or exploit among us at home will only help bolster their will to fight and thereby prolong the war.

It is by no means clear that we are as united on the home front as our enemies. It is by no means clear that the war may not be unnecessarily prolonged or the things for which we fight gravely will be jeopardized for that reason.

From this day on, the task will be even more difficult. We must expect greater, not lesser, stresses and strains in our civilian life. With the reduction in the available manpower and material and the demand for increased production, there must be even closer cooperation between labor and management; there must be greater reliance upon American ingenuity to get along without our accustomed conveniences.

In order to secure the best possible use of the available manpower and material, the Office of War Mobilization and the procurement agencies are now closely cooperating. A continued scheme of all programs will be possible through the machinery now provided by the joint Chiefs of Staff. The Secretary of War and Navy and other officials are heartily cooperating.

One objective of this new plan is that I may constantly bring forward decisions and proposals on the home front which should be considered by the joint Chiefs of Staff in making military decisions. The civilian front is interested in seeing that there is no waste, but it is not interested in diverting either manpower or materials from the military effort. The continuing review in the light of changing war conditions should result in diverting manpower and material from any project which is not now essential to projects which are essential to winning the war. We cannot expect to make civilian life easier at the expense of essential military requirements. First things must come first.

I realize the natural desire of any man whose business was converted from the production of implements of peace to implements of war to give thought to the reconversion of his plant at the end of the war. It is natural that a man should wonder what his competitor is doing in this regard. It is natural that he should want to know whether the government is giving thought to it and what plans are in the making. We must be reasonable. We must realize that if the leaders in industry and the responsible officials of government devoted their thought and time to this subject, it could only result in delaying the coming of peace. But while officials in charge of procurement agencies cannot devote their energies to this subject at this time, it does not mean that nothing

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should be done along this line. On the contrary, in many departments, competent officials are now devoting thought to the subject. They must continue to do so and it is my thought that their efforts should be coordinated. Many departments are affected. In each one, some individuals should be assigned to these studies. At the proper time, definite plans can be agreed upon.

My friends, because we are a peaceful people, we were unprepared for war, but because we are a peaceful people we must not be found unprepared for peace.

END

DISTRIBUTION: N, P, Y

Speeches - 1944

For Release to Morning Newspapers
Thursday, February 3, 1944

Text of address of Margaret A. Hickey, Chairman,
Women's Advisory Committee of the War Manpower
Commission, at Public Affairs Dinner, Dallas
Business and Professional Women's Club, Adolphus
Hotel, Dallas, Texas, Wednesday, February 2, 1944
at 7:00 p.m. EWT

The American woman has always had a job to do. First, there was the heartbreaking job of leaving the safety of the old familiar world for the risks of the new and untried.

Then there was the backbreaking job of building homes in the wilderness. It was a real wilderness. Harsh and threatening. There were no labor saving devices to make the building any easier. There was only one's own physical and moral stamina.

And even more difficult was the task of building out of these homes and by means of these homes, with their different languages and faiths and cultures, a nation - united, strong, heroic.

Certainly the greatest heritage these pioneers have passed on to us is this amazing ability, this high art, of solving difficulties, overcoming hardships, winning through. And today, in that great American tradition, we face individually and together the greatest of all tasks--the achievement of "peace on earth, good will toward men."

The first prerequisite to this achievement is victory on the battlefields. We know that "the cost will be high and the time may be long." For even though the enemy knows he's been fighting, the battle is far from won. It will require the full utilization of America's total brain and brawn. This means that no individual can escape the war. Every woman, as well as every man, must respond to the necessity of this hour.

The War Manpower Commission is faced acutely at this time with the problem of getting and holding enough women on war jobs. The Women's Advisory Committee of which I have the privilege to be Chairman, was appointed by Mr. Paul V. McNutt for the purpose of helping the Commission in its task of making the most effective utilization of America's womanpower. It is the duty of the Committee to study the national situation, advise the Commission of its findings, and point out steps that need to be taken, conditions which need to be corrected. I shall speak of some of these conditions later.

It is not the official duty of the Committee to operate programs designed to solve the problems. That is the job of other agencies of the Government, working in close cooperation with management, labor and the community.

But as private citizens, it is your duty and mine to support those man and womanpower policies, which the Commission establishes in the interests of the most effective prosecution of the war.

In giving our support to these policies, we must remember that all our activities, if they are to be really effective, must be coordinated. Indirect, unorganized activities, no matter how well-intentioned, will only confuse and undermine morale and hamper, rather than promote, the very difficult manpower mobilization and utilization task of the Government. I know I do not need to emphasize to you the importance of cooperation and coordinated action.

It is true that some definite, encouraging headway is being made in the better use of man and womanpower. But it is equally apparent that high rates of absenteeism and turnover are still contributing to under-utilization. In many instances old workers are leaving jobs faster than new workers are hired. America's great war effort can ill-afford this degree of defection now. Millions of American men are out on the battlefronts. Thousands have given their lives; and many other thousands will die before the war is over.

Women in this war have proved by their works that they can rise to any occasion, that in so far as a job is concerned they can take the place of almost any man outside the actual combat forces.

By the millions, women are at their posts. They are in the armed services, in the war plants, in civilian trades and services, and on the farms.

They are working at a great variety of tasks in founderies, in aircraft factories, in shipyards. They are to be found in lumber mills handling logs; in the railroad industry--on loading platforms, in machine shops and on section gangs.

They are working as helpers in all crafts in all industries.

In July 1943, the number of women at work numbered 17,100,000. That figure represented an all-time high for the employment of women.

In July 1943, all the women who normally would enter the labor market were already there. Due to changing situations in labor market requirements, this may not be entirely true in every instance today. In some communities, completion of contracts and other circumstances are bringing about a complete shut-down of some plants and a partial displacement of workers at other plants. In some places it may be possible to absorb all displaced workers immediately in other local war plants; in other places, it will be necessary to divert such workers to the service industries.

But the number of women at work must continue to increase. In July 1943, some 29,000,000 women were engaged in their own housework. About 11,000,000 of these women resided in nonfarm areas--therefore, most likely to be near centers of industrial activity--and they had no children under 14 in their households.

A little over three and one-half million of these women were under 45 years of age. It is from this group that many, although not all, of the new regular women workers must be drawn.

Out of a pool of some 3½ million potential workers, it would seem, on the surface, to be a relatively simple matter to obtain--say half a million. But it must be borne in mind that most of these 3½ million women are inexperienced at outside work and that they also have home responsibilities. Certain resistances, therefore, must be taken into account and overcome.

In many instances, it is the husband who must be sold on the idea of permitting his wife to work. Some object because they feel it a reflection on their ability to support their wives. Others do not wish to be put to the inconvenience of readjusting to changed routine in the home.

Some inexperienced women lack confidence in themselves to do the type of work expected of them. This lack of confidence in themselves may be due partially to their feelings that many employers accept women workers only as necessary evils.

Still other women are unwilling to do many of the kinds of work for which they are needed, because of a feeling that it is too hard or too monotonous or "beneath" them.

Another resistance--perhaps the most serious--is shown to be a lack of understanding on the part of many women that the great need for their services is bona fide. Though conscious of the fact that men and women in their communities are being asked to take war jobs, some still figure, "They don't mean me."

As already stated, war activity is not evenly distributed over the entire country. Women are not needed for the same types of work in all places. In some localities, the most urgent need is for women in war production work. In many other areas, the most pressing need may be for workers in essential civilian trades and services. From all America women are needed for the Armed services.

It is the duty of every woman to help speed the return of our American soldiers by getting into the war effort in some way. And she must get in with her hands as well as her heart. Once in, she must resolve to stick.

Our fighting men need every piece of equipment that we can possibly produce--and they need it as fast as we can turn it out. Every piece helps that much to hasten Victory. Training is available for war plant jobs. In many instances, trainees may be placed on the pay rolls while they are learning.

If workers in munitions, shipyards, and aircraft plants are to produce to their maximum capacity, war supporting, essential civilian trades and services must be kept going also at top speed.

You club women can be very effective in stressing the fact that America at War needs all women at work. There are many war-useful jobs, which must be kept filled in transportation, communications, retail trades and other services. You can help other women understand that when they take jobs as bus drivers, telephone operators, laundresses, restaurant workers, they are making a valuable contribution. These jobs may not be glamorous, but some of them can be of "battle importance."

To take a job, it may be necessary for many women to simplify their household routines. But this they can do. Thousands of them have. And many husbands and families have pitched in to help them do it.

Necessary civilian jobs are not hard to learn. The jobs are so varied that women of all ages can find work to fit their abilities. Those who can't take full-time jobs should be ready to take part-time jobs. Many non-working women without children can find it possible to perform outside part-time work in addition to maintaining their homes. And many other women already in trade, service, or government might find it possible to work a few additional hours a day on a second job.

Even some war plants have tried out the part-time or split shift for women with satisfactory results. Early last fall, the Women's Advisory Committee recommended the adoption of this program on a much wider scale.

The individual woman's place in the war effort depends upon the situation and needs in her own community. The War Manpower Commission's local U. S. Employment Service office knows, and can tell her, what these needs are. On whatever type of work the U. S. Employment Service office places the emphasis, that is the job which for her will mean the most in speeding the day of Victory and bringing our fighting men home.

As a part of its program to obtain maximum efficiency and to keep workers on the job, the War Manpower Commission will assist in the provision of plant and community facilities and services wherever they are lacking.

But this project requires the positive cooperation and assistance of other Government agencies, plants and communities.

The lack of adequate facilities and services is one of the major causes of absenteeism and turnover among women - - especially those who must do the double duty of work in and outside the home.

It is the responsibility of every community to see to it that child care facilities and services are adequate in quantity and quality to serve the children of local working mothers. It is not the policy of the War Manpower Commission to urge the employment of women with young children except as a last resort. But in many instances, all other local labor resources have been tapped, and the urgency of war makes the employment of such women necessary. In still other cases women with young children must take jobs for economic reasons.

Child care facilities and services must be provided in order to make possible the release of more women for war work. But a special responsibility rests upon us also to protect America's children from the hazards of neglect. We must see to it that for Victory on the battlefield, they do not pay the price of weak bodies, distorted minds, defective characters. Whatever the price the children of this generation are called upon to pay will be ultimately a price that America itself must pay.

Freedom is a privilege, but only responsible citizens are likely to enjoy its full benefits. We must be sure that children are trained today to enjoy the privileges and assume the responsibilities of free citizens tomorrow.

You club women can use your influence to see that sanitary and convenient housing facilities are available to workers in your communities. In many instances you will find that if housekeeping problems were reduced, women would be able to devote more energy to their jobs.

In many areas overburdened transportation facilities are a major cause of underutilization. Extensive use of car pools and scheduling of common carrier facilities under a staggered working hour system reduce travel time and lessen fatigue for women workers.

In the plant, appropriate induction, training, and orientation to the job - important for all new workers - are essential to the effective utilization of the inexperienced women now being drawn into the labor market.

The adequacy or inadequacy of safety, medical, eating, recreation and other facilities also has a definite bearing on the efficiency and productivity of workers.

Where husband and wife are both working, the importance of a well balanced, nourishing meal available at reasonable prices assumes great significance. When both members of the family can secure a good meal while at work, the planning and preparation of meals at home is less time-consuming and strenuous.

Adjustments must be made to help women with their shopping, laundry, banking, rationing and other problems.

In-plant counselling services can be of help to women in adjusting to work situations and in furnishing advice to new women workers concerning the availability of facilities. A counselor also may be effective in serving as liaison officer between the plant and the community.

Through your position in your community, you can help create the conditions, which will make it possible for more women to enter the labor market, to work effectively and stay on the job.

Every housewife who takes a job can and should come out of this war a better homemaker, a more truly thinking citizen, a healthier woman, and a greater credit to her home and country. How a woman enters into the spirit of her war job will determine the results for her.

So far I have dwelt upon the responsibility of all American women in the winning of the war itself. But you club women are intelligent and practical enough to know that while actively working to win the war we must, at the same time, be planning for the peace.

"Full employment" is generally agreed to be the key to desirable post-war adjustments. But what is meant by "full employment?"

It is understood that when men of the Armed forces return, they will, and should, have their old jobs back if they want them. This is written into the Selective Service Act. But the Women's Advisory Committee holds that all planning for economic readjustment, both now and after the war, should center on the provision of work opportunities for, and machinery for appropriate placement of ALL adults - - both men and women - - in the labor market.

We frequently hear employers and even officials make the statement that "Many women now at work will return to their homes when the war is over."

Women's distinctive responsibility for the family in our society is recognized. Millions of women desire to devote their full time to it. Nevertheless, all evidence so far made available to the Women's Committee tends to show that a relatively small proportion of the women now at work expect to withdraw from the labor market after the war.

Almost 14,000,000 working women are not newcomers to the labor force. The number of women who want and need to work has increased enormously during the war. There will be an even higher proportion of unmarried women in our population. There will be hundreds of thousands of women who must accept the permanent function of breadwinner because of the loss of husbands in the war. And there are the women who have adjusted their family life and found a new, often hard-won, economic status which they do not wish to lose. Prospects for job security and other new job opportunities after the war are as important to these women as to men.

Already post-war reconstruction plans in Australia and in England include the policy of aiming to "provide a job for every man and woman who wants one." We in this country, too, need to be swift in adjusting to the times; in taking account of the changes in women's employment status; and in planning for that great problem of the post-war world - - the successful employment of the whole population.

The problems of conversion of industry from war to civilian production are already being encountered in their initial stages. The resultant transfer, shifting, and demobilization of workers presents a major problem which requires consideration now. Machinery to handle the problems of conversion should be in effective operation long before the flood-tide of necessary post-war readjustments descends upon the nation.

Women's groups should be on the alert to see that the official wartime policy, which makes no distinction between men and women workers, is extended over into the post-war period. We can, and should, actively oppose discrimination in employment on the basis of sex in time of peace or war. We must not forget that the utilization of all human resources constitutes the major goal of any democratic nation

Today we are engaged in a terrific struggle for the survival of our democratic ideals. To this struggle we - each and everyone of us - must give our best, our all if necessary, now and until Victory is ours. We cannot bring back the thousands of lives - or even one life - given to the cause. But with all the strength of our hands, our minds, and our hearts, we can work and hold high the torch of a living Democracy - - to the end that Victory, when it comes, may be truly worth the price that we have paid.

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STANDARDS FOR EMPLOYMENT OF WOMEN

See Also ABSENTEEISM
HEALTH + SAFETY
POST WAR PLANNING

INTERNATIONAL LABOR OFFICE
WASHINGTON BRANCH
734 JACKSON PLACE
WASHINGTON, D. C.

October 9, 1939

Miss Mary Anderson
Director
Department of Labor
Washington, D. C.

Dear Miss Anderson:

Enclosed I am sending you a copy of a talk on Added Compensation Hazard of Older "orkers, given before the Industrial Accident Boards and Commissions in Milwaukee on 27 September. This is enclosed herewith.

Sincerely yours,

Ethel M. Johnson
Acting Director

Encl.
EMJ:aj

ADDED COMPENSATION HAZARD OF OLDER WORKERS*

Swiss Experience

by

Ethel M. Johnson

Among the reasons ascribed for job discrimination against workers over 40 or 45 years of age, considerable prominence is given in this country to the feeling that the older worker constitutes a greater accident risk and consequently a heavier compensation cost than does the younger person.

This opinion is expressed in popular discussion of the subject and is noted in the studies made of the problems of middle-aged workers seeking employment. The most comprehensive of these studies in the United States is that made by the Committee on Employment Problems of Older Persons appointed by Secretary of Labor Perkins and conducted with the assistance of the Division of Labor Standards of the United States Department of Labor under the director of Mr. Verne A. Zimmer.

Because of the wide-spread interest in the question of discrimination against older workers, the International Labor Office last year conducted an inquiry into the situation in various countries. Report of the results of this inquiry was presented to the Governing Body of the International Labor Organization at its meeting in London last October. It may be of interest to note that the inception of the inquiry was at the instance or Robert J. Watt, United States Workers' representative on the Governing Body of the International Labor Organization.

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* Talk given before the International Association of Industrial Accident Boards and Commissions at Milwaukee, Wisconsin, 27 September 1939.

Both studies, that of the United States Labor Department Committee and that of the International Labor Organization, discuss this popular concept with regard to the greater accident hazard of older workers. The I.L.O. study in this connection makes use of the results of two fairly recent European inquiries of a statistical nature on the influence of age on accident rates, one dealing with experience in Switzerland, the other with Austria. It is with reference to the Swiss experience that I have been asked to speak in discussing the added compensation hazard of older workers.(1)

The study of the Swiss experience, which is probably the most extensive investigation that has been made of the influence of age on the frequency and cost of industrial accidents, was conducted on the basis of the experience of the Swiss National Accident Insurance Fund for the period 1930-1934.(2) The coverage is concerned mainly with male workers in industry, transportation and building undertakings. It represents more than half a million years(3) of life exposure to industrial accident risks and more than 90,000(4) industrial accident cases. Although no specific check was made on this point, it was assumed that the age distribution of the insured population was the same as that of the male population employed in insurable occupations as disclosed by the 1930 census.

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(1) The material presented is based on a statistical summary of the Swiss study prepared by the International Labor Office, Geneva, Switzerland.
(2) W. Wunderlin "The Influence of Age on the Frequency of Industrial Accidents and the Cost of Workmen's Compensation". Report made to the 11th International Congress of Actuaries in Paris, 17 to 24 June 1937, Vol. II, pages 115-138, Paris, Gouthier-Villars, 1937.
(3) 533,643.
(4) 93,511.

On the basis of this assumption, figures were compiled showing the number of workers in each age group exposed to accident risks, the number of accidents by age groups and the frequency of accidents on the basis of work exposure. Other compilations show the average duration of temporary incapacity and of medical treatment by age groups in the case of injured workers, the average earnings, percentage of accidents resulting in incapacity or death by age groups and the net cost of insurance premiums required to cover the risk.

Except in the case of the youngest workers, those under 19 years of age, the tables with respect to accident frequency show a steady decline of accidents with age, accident frequency tending to fall in direct proportion to increasing years.

The highest accident frequency is seen in the age groups 20 to 24 years and 25 to 29 years, the ratio for these groups being 216 and 218 respectively per thousand years of life exposure to accident risks. With the group of workers 30 to 34 years of age, the accident frequency rate drops to 200 per thousand; while for thos 40 to 44 years of age, it is 162; and for those 45 to 49 years of age, 148 per thousand years exposure. The frequency is only two-thirds of the maximum at age 50; while at age 65 it is less than one-half.

There are doubtless a variety of reasons to explain this phenomonon. In the case of the youngest age group, the lower accident rate is presumably due to the fact that such workers by law and custom are excluded from many hazardous employments. The workers in the higher age groups are also by reason of their age and consequent physical conditions restricted to employment where there is less accident hazard.

Another factor which may have a bearing in the case of the age groups of 30 or over is that these groups include workers who have advanced to positions of more responsibility and presumably lessened physical risk. The laborer has in some instances become the foreman. The fact that average earnings increase steadily with age up to the 40 to 44 year group would give support to such assumption.

With all of these considerations taken into account, however, there still apparently remain other reasons to explain the steady decrease in accident frequency with age. It would seem logical to ascribe part of this cause to greater prudence and experience on the part of the older workers, these characteristics more than offsetting the slower reaction of such workers que to their lessened mobility and perception.

The fact that the youngest age group, those under 19 years, despite the safeguards placed around them by law and custom, have the fourth highest accident frequency rate would indicate that youth and inexperience are prominent factors in industrial accidents. The group in the 20's are free from most of the legal safeguards and have the highest accident rate of all age groups. Although workers in this age group are probably the ones employed in the heaviest and most hazardous types of employment, their high accident frequency rate is doubtless in part to be ascribed tothe risks which youth is inclined to take.

Accident frequency, however, is not the only factor in determining accident costs. Other factors which must be considered are the severity rate, the basic earnings of the worker; and, in the case of compensation in the form of pensions, his life expectancy. In the case of accident severity rates, the situation is directly reversed from that of accident frequency. Here the likelihood that an industrial accident will result in invalidity or death increases directly with the age of the injured worker.

Although middle-aged and elderly workers appear to be less subject to accidents than younger workers, accidents of the same kind are likely to be more severe in their consequence. The proportion of accidents which result in permanent incapacity or death increases with advancing age. The duration of temporary incapacity and the period required for medical treatment also increases with the years. According to the Swiss experience, the average duration of temporary incapacity resulting from industrial accidents is approximately one and one-half times as long for workers in the age group 45 to 49 years of age as for those in the group 20 to 24 years of age; while it is nearly twice as long for the workers in the over 60 age groups.

The average duration of medical treatment is 20 days for the worker between 20 and 24 years of age, approximately 30 days for the worker 45 to 49 years of age, and approximately 34 days for the worker 55 to 59 years of age. The probability that an accident will cause invalidity or death is doubled between the ages 25 and 50 and tripled between the ages 25 and 65 years.

The factors involved in the cost of accident compensation include the frequency of accidents, their severity, and the rates of benefits, which in turn are proportional to the basic wage of the worker. The Swiss investigation found that for workers between the ages 20 and 64 years the diminishing accident frequency and the increasing accident severity balanced one another so that the net insurance premium required to cover the risk is constant throughout this range.

In this connection it should be noted that in Switzerland workmen's compensation for permanent disability takes the form of a pension rather than a lump-sum settlement; and that although permanent incapacity cases are more frequent among older workers, the period for which injured persons have to be paid is naturally shortened in proportion to their life expectancy. The situation, of course, is different where compensation is paid in the form of a lump-sum.

As a result of the Swiss investigation, the conclusion is drawn that the belief that older workers involve higher compensation costs with respect to industrial accidents appears in most cases to be unfounded. It is pointed out, however, that a belief exerts its effects whether it corresponds to reality or not; also that this belief is a motive for discrimination in the employment of older workers, but that its force varies according to the mode of covering the risk. It is further explained that this force will probably be at its maximum when the employer is not insured but carries his own risk; and that it will also operate to some extent where the employer is covered by a general insurance plan if the system of experience rating is applied.

As the nature of the benefits provided and the form of insurance have a bearing on the total cost of compensation, it may be well to mention the type of benefits provided under Swiss law for workers suffering from industrial accidents. These include the following: (1) Payment of all medical expenses; (2) Allowance of 80 percent of daily earnings under temporary incapacity for work; (3) Invalidity pension of 70 percent of presumed reduction of annual earnings continuing for life, subject to periodic review; (4) Pensions to survivors; 30 percent of annual earnings to widows, 15 percent for each child; 20 percent for dependent parents, maximum 60 percent of the annual earnings.

A feature of the Swiss law which is distinctly different from the workmen's compensation laws in the United States is the absence of lump-sum settlements in permanent disability cases. There is, however, certain correspondence with the benefits payable under workmen's compensation laws in the United States. Our laws, although they vary in form from State to State, in general make provision for medical expenses; for a certain percentage of the earnings during temporary incapacity;; for compensation either in the form of pension for a specified period or a single payment, in the case of permanent disability, and for death benefits in the case of fatal accidents.

An explanation of the cost of industrial accidents by age groups in connection with the various kinds of benefits provided under the Swiss law may be of interest. It has already been pointed out that the Swiss investigation shows that the average duration of medical treatment of industrial accident incapacities is in almost direct proportion to age. The cost of temporary incapacity allowance varies not only with the duration of invalidity but with the rate of daily earnings. The average daily wage for the workers covered rises rapidly in the younger age groups — those under 30 years — then advances slowly to the maximum, which is for the age group 40 to 44 years, and thereafter falls gradually with increasing age.

The cost of medical expenses computed on each thousand francs of wages is highest for the youngest age group and falls with advancing years. For the 20 to 24 age group it is approximately 5 francs per thousand and for the 50 to 54 age group it is approximately 4 francs per thousand. Temporary incapacity allowance reaches its maximum with ages 25 to 29 years and thereafter declines with each successive age group, being 7.27 per thousand francs of wages for the first age group mentioned and 5.46 per thousand for the age group 60 to 64 years.

The probability that an accident will result in permanent disability, as noted, increases with age and is twice at age 45 and three times at age 60 what it is at age 20. The capital which must be set aside to finance the pension for permanent incapacity under Swiss law, is computed from three factors: the degree of incapacity (which may be modified at successive reviews), the basic annual earnings and the life expectancy of the beneficiary. All of these factors are influenced by age.

The average initial degree of incapacity -- that is the incapacity at the date of pension award -- increases slowly from 26 percent for the age group 20 to 24 years to approximately 30 percent for the age group 55 to 59 years. The probability that the degree of incapacity will be found to decrease at successive reviews also diminishes with increasing age. The basic annual earnings follow the same course as the basic daily wage and reach the maximum in the age group 40 to 44 years.

The life expectancy of the beneficiary diminishes with age and helps to counterbalance the effect of the higher initial degree of incapacity and its longer duration. The combined effect of these three factors determining the cost of a permanent disability pension is that the capital value of the average pension for each age group drops from nine to six times the annual pension as the age of the injured worker at the date of the award advances from twenty to sixty years.

The probability that an industrial accident will result in death increases with age even more rapidly than the likelihood that it will result in permanent disability. The cost of survivors' pensions in the case of a fatal accident depends on the number, relationship, and the age of the survivors as well as on the basic annual earnings of the deceased worker. The resultant of these various factors is that the cost of a fatal accident follows a curve that has two maxima — at age 37 and 52 years. The rate per thousand francs in wages increases rapidly from the youngest age group to that 35 to 39 years of age. It drops slightly for the age groups 40 to 44 and 45 to 49 years, reaches approximately the same maximum at ages 50 to 54 years, then falls rapidly for the higher age groups.

The total accident premium for each group, including the cost of covering each of the different types of benefits provided under the Swiss law, shows comparatively little variation from ages 20 to 64 years. The premium for the first mentioned group is 19.20 per thousand and for the last mentioned 19.88 per thousand. The highest rate, 21.95 per thousand, is that for the age group 55 to 59 years; and the next highest rate 21.49 per thousand is that for the 35 to 39 year age group.

The conclusions of the Swiss study, which in general are supported by the study of the Austrian experience, may be summarized as follows. Industrial accident frequency reaches its maximum with the age groups 20 and under 30 years and thereafter declines steadily with age. Accident severity, however, increases with age as also does the probability that accidents when incurred will result in invalidity or death. These factors largely offset each other so that the compensation costs remain fairly constant between the ages of 20 and 64 years — that is for all industrially effective age groups.

It is noted that these conclusions are based on experience with general industry and are not necessarily true of specific industries or of individual establishments. It should also be borne in mind that the compensation costs are computed on the basis of compulsory group insurance and would not apply in the case of individual plants insuring their own risks. Where, however, there is a system of general coverage of industrial accident risks, the factor of age is one of minor significance, and there would appear to be little basis for discrimination against/the employment of older workers on the ground of added compensation expense.

In view of the difficulties which the middle-age or elderly person encounters in securing employment once he has been thrown out of work, it is essential that efforts should be made to remove such difficulties as are based on misconception or prejudice. To that end, factual studies of the kind just discussed represent a distinct contribution.

Frequency and Severity of Industrial Accidents to Men, and corresponding Net Premiums, by Age Groups (Swiss Experience, 1930 - 1934)

(From International Labor Office Report on the question of Discrimination Against Elderly Workers*)

Age group	Frequency of accidents per 1,000 years of life exposed to risk	Frequency, per 1,000 cases of accident		Net annual premium required to cover risk, per 1,000 frs. of wages.
		Invalidity	Death	
-19	179	15.89	1.63	16.90
20-24	216	20.94	1.99	19.20
25-29	218	23.93	2.27	20.28
30-34	200	29.04	2.89	21.44
35-39	179	33.33	3.33	21.49
40-44	163	38.79	3.74	21.23
45-49	148	43.45	4.52	20.68
50-54	137	48.45	6.23	21.44
55-59	127	57.63	6.75	21.95
60-64	108	67.08	8.94	19.88
65-69	85	72.33	6.08	16.16
70-	50	89.71	10.55	11.74
Total	175	31.31	3.27	20.35

*W. Wunderlin's study of the experience of the Swiss National Insurance Fund.

U. S. DEPARTMENT OF LABOR
Women's Bureau
Washington

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SICKNESS ABSENTEEISM
SUMMARY OF INFORMATION AVAILABLE

Frequency of illness

According to Public Health Service Reports based on years of reporting by sick benefit associations of illnesses disabling for over 7 days, industrially employed women show an excessive number of illnesses per year as compared with industrially employed men. For the year 1941 the number of cases per 1,000 women was 163.3; for men 101.3.

For illnesses of short duration the excessive rate for women is even more marked. One company, for example found the annual rate of absences of 1 day or longer per 1,000 women, 1,561.2; per 1,000 men 894.9.

There is great variation in sick absentee rates between companies reporting to Public Health Service. In some the rate for women approaches or is slightly under the rate for men. A report on illnesses of 8 days or longer among Westinghouse Electric and Mfg. Co., Pittsburghplant showed 101.7 cases per 1,000 women as compared to 96 cases per 1,000 men.

Days lost per year from illness

Boston-Edison Co., reporting all lost time from illness of 1 day or longer found that women lost in 1941 an average of 9.5 days, men 8.1 days.

For illnesses under 8 days duration women at General Motors lost an average of 7 days, men 5½ days according to a report made in June 1942.

The Fisher Body Division of General Motors reported a total of 5,013 days lost by 412 female employees in 1940, while 3,219 males lost 9,751 days.

A sample study of salaried employees at Westinghouse, Pittsburghplant, showed women losing 2.2 percent of their available time because of illnesses, men losing 1 percent of their available time.

Length of disability

Women's illnesses tended to be shorter than men's. Reports from Boston Edison Co. show an average of 6 days lost per absence for women, 9 days for men. Women lost less time per absence from every class of disability except nonindustrial injuries.

Considered by duration of each absence, the Boston Edison Co. shows one-third of all women's absences lasted only 1 day while a little over one-fifth of men's absences were that short.

Report on salaried employees at Westinghouse showed little difference in duration of men's and women's absences. Women's absences were slightly longer - 3.9 days as compared to 3.5 days.

Other evidence of comparative severity

A study of a community in Baltimore showed a somewhat higher proportion of disabled men receiving medical care than did disabled women.

Types of illness

The respiratory diseases cause the greatest number of absences both for men and women. The sample study at Westinghouse showed over 55 percent of male sickness absences and over 75 percent of women's sickness absences caused by respiratory diseases.

Public Health Service reports of illnesses of 8 days or longer showed an excess frequency rate of men over women of diseases of the heart, rheumatism, both acute and chronic, and other diseases of organs of locomotion. The greatest excess of women's cases over men's is reported for respiratory diseases, digestive diseases, genito urinary diseases (other than nephritis) and neurasthenia

ALL ABSENTEEISM

There is little factual information on absences due to causes other than illness. An unpublished report from Consolidated Aircraft's 2 plants in California for 4 months in 1942 shows higher absence rates for women but also shows that these rates are not increasing so rapidly for women as for men. In plant II in one week of the month of October, the male rate reached a higher level than the female rate.

A plant (not named) reporting to the National Industrial Conference Board lists all causes of absence in the year 1941 as follows: No breakdown is given by sex.

Sickness	7.83
Transportation	.02
Permission	1.26
Injured	.20
No excuse	.11
Sickness in family	.64
Suspended	.03
Vacation	6.82
Laid off	5.13

Total days lost: all causes 22.04

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

SICKNESS ABSENTEEISM

I - Frequency of Men's and Women's Illnesses Compared

(1) U. S. General 1941 (Public Health Service)
(From Public Health Reports, Sept. 4, 1942, p. 1345) 1/

Absences of Over 7 Days

	Annual number of cases per 1,000 -	
	Males	Females
Sickness and nonindustrial injuries	101.3	163.3
Percent of female rate	62	-
Percent of male rate	-	161
Nonindustrial injuries	12.0	13.9
Sickness	89.3	149.4
Respiratory diseases	40.8	63.1
Nonrespiratory diseases	45.6	81.8
Digestive diseases	15.4	26.9
Nondigestive diseases	30.2	54.9
Diseases of the heart	2.5	1.8
Other circulatory diseases	3.6	4.7
Nephritis, acute and chronic	.4	.5
Other genitourinary diseases	2.4	10.6
Neuralgia, neuritis, sciatica	2.0	2.5
Neurasthena, and the like	1.0	6.2
Other diseases of the nervous system	1.3	1.3
Rheumatism, acute and chronic	3.7	3.3
Diseases of organs of locomotion except joints	2.8	2.4
Diseases of the skin	2.7	3.9
Infections and parasitic diseases	2.5	4.1
Cancer	.5	.3
All other diseases	4.8	13.3
Ill-defined and unknown causes	2.9	4.5

1/ Illnesses of over 7 consecutive calendar days reported for 257.726 male person-years and 18,008 female person-years.

The year 1941 showed an excessive rate of illness for both men and women from appendicitis, for men an increase over previous years in bronchitis and pneumonia and for women an increase in diseases of the heart and other circulatory diseases and an increase in infections and parasitic diseases.

(2) Boston Edison Co. 1941 (Public Health Service Reports, Apr. 24, 1942, p. 627)

Absences of 1 day or longer

	Annual number of absences per 1,000 -	
	Males	Females
All disabilities - - - - - - - - -	894.9	1,561.2
Industrial injuries - - - - - - - - -	26.6	3.5
Nonindustrial injuries - - - - - - -	34.8	61.2
Respiratory diseases - - - - - - - -	559.6	832.2
Nonrespiratory diseases - - - - - - -	273.9	664.3

(3) New England Telephone & Telegraph Co., Sickness Disability, 1940
(Industrial Health and the War, Daniel L. Lynch, M. D.)

Cases per 1,000

Men		Women	
Age group	Cases	Age group	Cases
20-29	85	Under 25	225
30-39	125	25-34	305
40-49	175	35-44	315
50-59	205	45-54	330
60 and over	235	55 and over	320

(rates approximate; taken from chart)

Age seems a more important direct factor in male illness than female.

• (4) Committee on Costs of Medical Care and U.S.P.H.S.
(Cases and Days of Illness Among Males and Females with Special Reference to Confinement in Bed, by Selwyn D. Collins, P.H. Reports, Jan. 12, 1940, pp. 47-93)

720 cases per 1,000 males
833 cases per 1,000 females (exclusive of female genital and puerpal conditions)

• (5) Baltimore study in Milbank Memorial Fund Quarterly, July, 1942, pp. 221-241.
(The Severity of Illness Among Males and Females, Sally Preas and Ruth Phillips. Year ending 1940) 1/

	Ratio per 1,000				Ratio of prevalence for females to that for males
	Males (3,314)		Females (3,336)		
Total cases	142.7		231.7		1.62
Acute illness	44.3		69.8		1.58
Chronic illness	98.4		161.9		1.65
Major		52.5		92.3	1.76
Minor		45.9		69.6	1.52
Institutional	0.4		0.3		.75

1/ Number of persons for whom illness was reported.

* (6) Baltimore study (see 5)
(Incidence of illness during 12 months, 1939-40. 1/

Causes of illness	Rate per 1,000 population Male	Female	Ratio of rate for females to rate for males
All causes	1105.0	1593.9	1.44
Nondisabling	623.7	984.8	1.58
Disabling but not confined to bed	234.4	276.2	1.18
Confined to bed	247.0	332.9	1.35
Respiratory illness	669.7	915.2	1.37
Nondisabling	384.8	569.7	1.48
Disabling but not confined to bed	123.1	135.0	1.10
Confined to bed	1161.8	210.5	1.30
All other illness	435.3	678.7	1.56
Nondisabling	238.8	415.2	1.74
Disabling but not confined to bed	111.3	141.2	1.27
Confined to bed	85.1	122.4	1.44

1/ Rate at which attacks of illness occurred. 2713 years of life for males and 2770 years of life for females.

(7) General Motors Corp. The Substandard Worker, Physical Examination and Placement, by F. J. Ochsner, M. D., Medical Director, Fisher Body Division, in Industrial Medicine, June, 1942, p. 283-4.

Female employees had 20 percent more cases of non-occupational injuries and diseases than the male employees.

(8) Westinghouse Electric and Mfg. Co., Pittsburgh, Pa., 6 months, 1942, salaried workers (unpublished).

Number of periods of absence	371 Males	334 Females
Total	734	1440
Colds	238	389
Influenza	165	360
Grippe	145	209
Sore throat	29	36
Sinus infection	35	22
Tonsillitis	12	86
Laryngitis	17	7
Appendectomy	-	29
Accidents (non	-	58
Other	93	245

(9) Westinghouse Electric & Mfg. Co., Pittsburgh Pa., 1941 (unpublished)
Factory employees.

Illnesses of 8 Days or Longer

Cause	Number of cases per 1,000 -	
	Males	Females
Sickness and nonindustrial injuries	96.0	101.7
Nonindustrial injuries	12.7	8.3
Sickness	83.3	93.4
Respiratory diseases	36.5	35.1
Digestive diseases	16.3	24.6
Nonrespiratory-nondigestive	28.4	32.4
Ill-defined and unknown causes	2.1	1.3

Frequency and duration of Disabilities Causing absence from work among employees of a Public Utility 1938-41

II - Days lost per year - men and women compared

(1) U. S. Public Health Service - Disability among employees of Boston Edison Co., 1941. (U.S.P.H.S. Reports, Apr. 24, 1942, p. 627)

Annual Number of Days Lost per Employee from Disabilities of 1 Day or Longer

	Males	Females
All disabilities	8.074	9.503
Industrial injuries	.694	.019
Nonindustrial injuries	.383	1.138
Respiratory diseases	3.280	4.082
Nonrespiratory diseases	3.717	4.264

(2) General Motors Corp., Study of Apr. 1942. Sickness Absenteeism, A. T. Court in Industrial Medicine, June 1942, p. 271 ff.

Short term absenteeism has been found substantially higher among women than men. Women lost an average of 7 days per person a year from illnesses under 8 days duration, while men lost an average of 5½ days per person from illnesses of such brief duration.

(3) General Motors Corp., Fisher Body Division, Lansing 1940 (see p. 6)

Number of Days Lost in 1940 from Disabilities Lasting at Least 7 Days

	3219 Males	412 Females
Total days lost	9751	5013
Non-occupational injuries	1389	221
Respiratory diseases	2326	926
Digestive diseases	2475	807
Other diseases	3496	2004
Pregnancy	--	1055

(4) Westinghouse Electric and Manufacturing, 6 months, 1942. (Salaried employees) (unpublished)

Number of Days Lost from Disabilities of 1 Day or Longer

	371 Males		334 Females	
	Number	Ratio to available time in percent	Number	Ratio to available time in percent
Total Days lost	2524	1.00	5620	2.23
Colds	472	.19	1072	.42
Influenza	640	.25	1185	.47
Grippe	465	.18	619	.24
Sore Throat	47	.02	187	.07
Sinus Infections	76	.03	367	.04
Tonsillitis	38	.02	386	.15
Laryngitis	26	.01	22	.01
Appendectomy	-	-	590	.24
Accidents	-	-	396	.17
Other	760	.30	795	.29

III - Length of Disability

(1) Boston Edison Co. (see p. 4)
Absences of 1 day or longer

Average Number of Days Per Absence

	Men	Women
All disabilities	9.02	6.09
Industrial injuries	26.06	5.50
Nonindustrial injuries	11.01	16.60
Respiratory diseases	5.86	4.91
Nonrespiratory diseases	13.57	6.42

(2) Boston Edison Co. 1933-1937. Duration of Disability
(Public Health Service, U. S. Public Health Service Reports.)

Duration	Male Absences	Female Absences
Total	100.0%	100.0%
1 day	22.7	32.6
2	16.9	21.1
3	14.2	12.6
4	9.6	7.8
5	7.5	4.8
6	6.3	3.8
7	5.8	4.5
8-372	17.0	12.8

(3) Westinghouse Electric and Mfg. Co., Pittsburgh. (unpublished)
Absences of 1 day or longer

Average Days of Duration of Absence

	371 Males	334 Females
Total	3.6	3.2
Colds	2.0	2.8
Influenza	3.9	3.3
Grippe	3.2	3.0
Sore Throat	1.6	5.2
Sinus infection	2.2	16.7
Tonsilitis	3.2	4.5
Laryngitis	1.5	3.1
Appendectomy	-	20.3
Accidents	-	6.8
Other	8.2	3.3

I V - Other Evidences of Severity

*(1) Baltimore Survey (see p. 2)

There is an excess number of cases among females in both severe and minor illnesses. Table on p. 3 shows that the excess in rate for females for nondisabling illnesses was greatest - 58 percent greater than for males. However, the female rate for bed illnesses was 35 percent greater than the male rate.

*(2) Baltimore survey (see p. 2)

The percentage of illnesses receiving medical care among females was somewhat lower than that among males for each class of disability for all illnesses, with the exception of nondisabling, respiratory illnesses where the percentages were the same for both sexes.

Percent of Illnesses Receiving Medical Care by Sex

	Male	Female
All causes	38.5	32.0
Nondisabling	22.3	18.7
Disabling - not confined to bed	48.1	39.7
Confined to bed	70.3	65.0

V - Type of Illness (see also P.H.S. reports, p. 1, and others under frequency, days' lost, and so forth.)

(1) New England Telephone and Telegraph Co. (see p. 2)

Frequency of medical diagnosis in illness of more than 7 days' duration. 1936-40.

	Distribution by types of disability 1/		Distribution by time lost by type 2/	
	Men	Women	Men	Women
Upper respiratory	37.4	45.1	16.6	27.4
Gastro-intestinal	9.1	4.2	9.1	4.5
Off duty accidents	7.9	10.9	7.1	10.9
Arthritis	7.0	3.4	8.7	6.1
Skin	4.0	4.5	2.8	3.4
Appendicitis	3.3	3.9	3.3	5.0
Veins and arteries	2.4	-	3.7	-
Pneumonia	2.3	-	2.6	-
Mental and nervous	2.3	3.7	5.2	7.9
Heart	2.2	-	5.8	-
Liver and gall bladder	2.1	1.4	-	-
Hernia	1.9	-	2.6	-
Cancer	1.3	-	4.1	-
Hypertension	1.4	-	3.0	-
Miscellaneous	15.4	17.0	25.6	28.5
Genito-urinary	-	4.4	-	6.3
Anemia	-	1.5	-	-

1/Based on 4334 cases of illness of men, 11,615 cases of illness of women.
2/Based on 173,380 days lost because of illness of men, 300,092 days lost because of illness of women.

VI - Day on Which Absence Started and Day of Return to Work

(1) New England Telephone and Telegraph Co. & Consolidated Edison (see p. 2) 1936-40

1. Illnesses began on Monday in a very large proportion of cases throughout the 5 years.

2. Nearly 70 percent of men returned to work on Monday; nearly 60 percent of women returned on Monday.

ALL ABSENTEEISM

(1) Consolidated Aircraft Corp. Absenteeism of Hourly Employees, July 1942 to October 16, 1942. (unpublished)

Percent Absent Daily

	Plant I		Plant II	
	Men	Women	Men	Women
July	4.1 - 4.5	5.9 - 7.0	4.3 - 5.2	6.2 - 8.2
August	4.4 - 5.0	7.2 - 8.0	4.6 - 5.6	7.7 - 9.3
September	4.0 - 5.5	5.7 - 8.4	4.8 - 7.6	6.6 - 11.7
October	6.5 - 6.7	7.2 - 7.9	8.5 - 9.7	8.8 - 8.9

(2) Curtiss-Wright, St. Louis, Missouri (Christian Sci. Mon., August 4, 1942)

Absences of women are no greater than among men, less than 3 percent.

(3) One company not reporting sex of employees (N.I.C.B., Report No. 46, Reducing Absenteeism, p. 17)

Days Lost by Cause per Employee

Cause	1940	1941
Total	24.81	22.04
Sickness	9.44	7.83
Transportation	.04	.02
Permission	1.22	1.26
Suspended	.06	.03
Vacation	6.72	6.82
Laid off	6.42	5.13
Injured	.18	.20
No excuse	.13	.11
Sickness in family	.59	.64

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* Non-industrial group

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

Companies Whose Absenteeism Reports Are Summarized Here or Whose Records Are Described in National Industrial Conference Board Report No. 46 - Reducing Absenteeism

1. Curtiss-Wright, St. Louis, Mo. (Statement made that absenteeism under 3 percent; no higher for women than men.)

2. Remington Arms Company (N. I. C. B.)

3. The Koppers Co. (N. I. C. B.)

4. The Owens-Illinois Glass Company (N. I. C. B.)

5. Consolidated Edison Co. of New York (N. I. C. B.)

6. American Pulley Company (N. I. C. B.)

7. Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa. (visited by Mettert and Ziegler)

8. General Electric, Erie, Pa. plant (System of visitors for daily checking of absentees) Letter written to Miss Lucy Norton, Personnel Director for Women.

9. General Motors Corp., Fisher Body Division

10. New England Telephone and Telegraph Co.

11. Kollsman Division Square D Company - Louisville, Ky. (average absenteeism under 1 percent)

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

ABSENTEEISM REPORTS - UNITED STATES

I - ILLNESS

(1) U. S. Public H. S. Reports, Apr. 24, 1942 - Employees of Boston Edison 1938-41 (one day or longer)

(2) U. S. Public H. S. Reports, Sept. 4, 1942.- Disabling Morbidity Among Male and Female Industrial Workers During 1941. p. 1344-1347 (latest in series)

(3) National Institute of Health and Milbank Memorial Fund in Milbank Memorial Fund Quarterly, July 1942 - Severity of Illness Among Males and Females(Balti.)

(4) National Health Survey, 1935-36 - Men and Women Disabled on Day of Canvass (15-64 years)

(5) N. I. H. P. H. S. Reports, Jan. 6, 1939, Nonindustrial Injuries Among Male and Female Industrial Employees. Data through 1937)

(6) New England Journal of Medicine - Industrial Health and the War, by Daniel L. Lynch, M.D. (1940) Types of Illness Compared Men and Women and Medical Prevention.

(7) Wastinghouse group (unpublished) Men and Women, 6 months of Illnesses, 1942, Salaried employees.

(8) Industiral Hygience Foundation (then Air Hygience Foundation) Sick Absenteeism in Industry, Its Extent, Its Causes and Control.

(9) General Motors Corp., The Substandard Worker, Physical Exam & Placement. Industrial Medicine, June 1942. (Lost time Male and Female from Illness.)

(10) General Motors Corp., Sickness Absenteeism. A. T. Court, Industrial Medicine, June 1942. (Rates)

II - ALL CAUSES

(1) Consolidated Aircraft Corp., (unpublished report) Absenteeism of Hourly Employees (Absences, not sick absences)

ABSENTEEISM IN BRITAIN

(1) Monthly Labor Review, Nov. 1941, p. 1164 - Absenteeism in British Plants (reasons and preventives)

(2) Review of Economic Studies, Summer 1942, - Voluntary Absenteeism in the Cutlery Trades (male and female)

(3) J. Industrial Hygiene & Toxicology - Health in Industy (rates male and female)

(4) Labor Market, Sept. 1942, p. 10 ff. - Control of Absenteeism and Lateness in British Armament Industries.

(5) V. J. Gosden, Absenteeism in Munitions - The Newer and Younger Workers, in Manchester Guardian, May 1, 1942. (rates women part-time, married women, etc., causes.)

(6) Vernon, H. M. - "Health in Relation to Occupation", Oxford University Press, London, 1939.

Mohr

ALL COMMUNICATIONS SHOULD BE ACCOMPANIED BY CARBON COPY AND ADDRESSED TO

ARMY SERVICE FORCES
OFFICE OF THE CHIEF OF ORDNANCE
SAFETY AND SECURITY BRANCH
333 NORTH MICHIGAN AVENUE
CHICAGO 1, ILLINOIS

FOR VICTORY
BUY
UNITED STATES
WAR
BONDS AND STAMPS

TO INSURE PROMPT ATTENTION
IN REPLYING REFER TO
SSD NO. 710/1056
ATTENTION OF
SPOGU

29 May 1944

U. S. Department of Labor
Women's Bureau
Washington 25, D.C.

Attention: Miss Jennie Mohr,
Associate Industrial Economist

Dear Miss Mohr:

The talk "Educating Women for Safety and Health" which was given by you at Charleston, West Virginia in March 1944, has been reviewed with interest by this office. It is regretted that the material which you requested from us was not submitted prior to this time, however, as a matter of information we are sending material which is now available. The tabulations listed below indicate the accident experience for all government-owned Ordnance establishments for the entire year of 1943.

Entire Ordnance	Frequency Rate 1943
Male and Female	8.4
Male	10.4 *
Female	6.0 *

* December rates estimated for male and female on a percentage basis.

During this same period, approximately 40% of the total hours of exposure were worked by female and 60% by male. The frequency rates indicate that 30% of all disabling injuries were to women. However, it cannot be stated definitely that because female employees have a lower frequency rate than male employees, women are safer workers. It must be kept in mind that female employees in Ordnance generally are inspectors and machine operators. The most hazardous work in connection with machines is performed by men, who are set-up or maintenance men, the women's work being confined largely to operation of well-guarded machines.

It should also be kept in mind that the material handling, wherein there is a great exposure to accidents, is performed to a large extent, by male employees. It is an established fact both in Ordnance and in industry in general, that where material handling processes are involved, the frequency rate is higher. It is generally accepted that, with the exception of material handling and certain repair work that requires mechanical skill possessed to a large extent only by men, job for

U.S. ARMY SAVE CONSERVATION PROGRAM

job women are safer workers.

The inclosed listing of accident causes and associated factors may be of interest to you. Information contained thereon was tabulated from Individual Injury Reports submitted by approximately 130 Ordnance plants throughout the country. The terms used are those of the American Standards Association with some special classifications to fit the needs of Ordnance.

Attached also is a graph comparing the percentage of women employed in the Shell and Bomb Industry, one branch of Ordnance, with a frequency rate for that industry.

Recent statistics on accident experience for Ordnance establishments, as available in this office, do not include separate tabulations for male and female.

We hope that the information contained herein will be useful to your office, and should we be able to render any further assistance, please so advise us.

Yours very truly,

Reuel C Stratton

Reuel C. Stratton
Lt. Colonel
For

George R. Ensminger
Lt.Colonel, Ord. Dept.

2 Incls.
1. List of accident causes and associated factors.
2. Graph

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Lt.Colonel, Ord. Dept.

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1. List of accident causes and associated factors.
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ALL GOVERNMENT-OWNED ORDNANCE PLANTS

INJURIES TO WOMEN, ENTIRE YEAR, 1943

Type of Accident

Striking against	327 — 9.9
Struck by	789 — 23.8 - ?
Caught in, on, or between	417 — 12.6
Fall on same level	444 } 21.3
Fall to different level	261
Slip and overexertion	411 — 12.4
Contact with temperature extremes	50

Inhalation	357 — 10.8
Contact with electric current	3
Contact with chemicals	26
Accident type-n.e.c. *	145
Explosives	30
Unclassified-insufficient data	48
Total	3308

It should be pointed out that in some cases accidents of the explosion type were listed on Individual Injury Reports as "struck by".

Agency

Machines	490 — 14.8%
Hoisting apparatus	117
Vehicles	330
Hand tools	110
Chemicals	411
Working surfaces	576 — 17.4%
Boxes, benches	323
Shells	73
Bombs	32
Lumber and woodworking	26
Guns and parts	36
Containers	24

Dusts	81
Pumps and prime movers	1
Elevators	-
Conveyors	7
Boilers	-
Animals	2
Mech. power trans. apparatus	-
Electrical apparatus	1
Radiation	-
Miscellaneous agencies	605 — 18.3%
Unclassified-insufficient data	63
Total	3308

Unsafe Act

Operating without authority	130
Operating at unsafe speed	196
Making safe devices inoperative	52
Using unsafe equipment	210 — 6.3
Unsafe loading	264 — 8.0
Taking unsafe position	695 — 21.0

Working on moving equipment	84
Distraction	27
Failure to use safe attire	222 — 6.7
Unsafe act-n.e.c. *	355
Unclassified-insufficient data	125
No unsafe act	948 — 28.6
Total	3308

Incl. #1

4.7%

Unsafe Condition

Improper guarding	155	Improper dress	156
Defective substances	406	Unsafe mechanical condition-ne.c. *	86
Hazardous arrangement	415	Insufficient data	114
Improper illumination	25	No unsafe mechanical condition	1829
Improper ventilation	122	Total	3308

Unsafe Personal Factor

Improper attitude	1014	No unsafe personal factor	1021
Lack of knowledge	720	Insufficient data	149
Bodily defects	204	Unsafe factor-n.e.c. *	200
		Total	3308

Nature of Injury

Death	5	Dermatitis	170
Amputations	89	Other allergic symptoms	267
Burns or scalds	74	Hernia	5
Strains, sprains, hernia	71	Industrial disease	49
Crushing	-	Eye irritation	12
Contusions	1346	Miscellaneous	5
Cuts, lacerations	428	All other types-	153
Foreign bodies	126	n.e.c. *	5
All other wounds	36	Insufficient data	-
Fractures	467	Total	3308

Part of Body

Eye	162	Leg	591
Head	227	Foot	367
Chest	129	Abdomen	131
Back	274	Body	56
Arm	306	Body-n.e.c. *	429
Hand	635	Insufficient data	1
		Total	3308

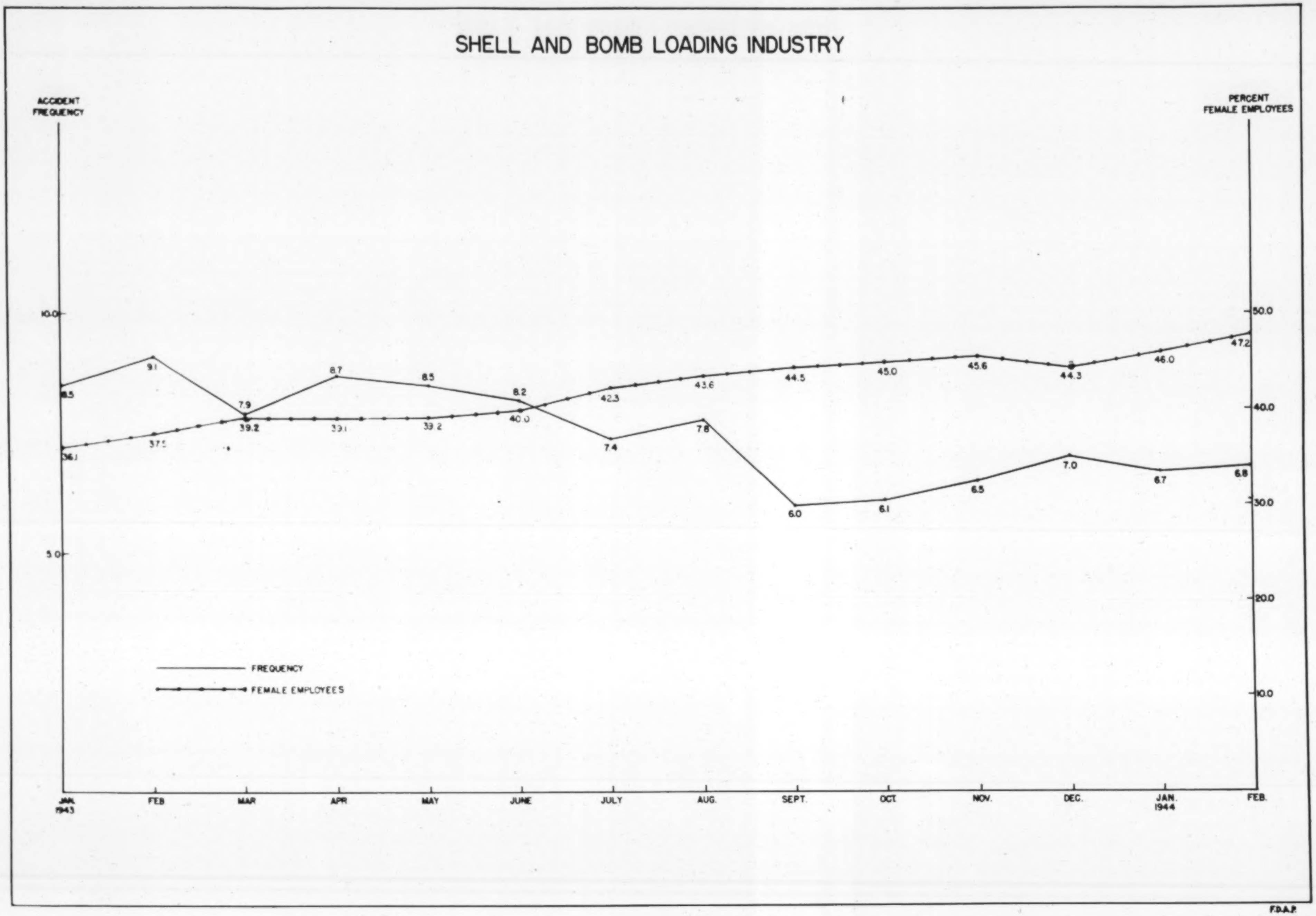
Type of Disability

First aid	3	Permanent partial	108
Temporary partial	442	Permanent total	1
Temporary total	2745	Death	9
		Total	3308

The three first aid cases were not required to be reported. Temporary partial disabilities entail no lost time and, therefore, do not affect the frequency rate.

* Not elsewhere classified.

SHELL AND BOMB LOADING INDUSTRY



F.D.A.P.

#2

Kaiser Yards--three in Pacific N.W.
From report by Mr. Kopkins, dated Oct. 1944.
(via BLS)

Aug	13	13.6	11.6	11.1	11.0	11.7	15.2
	20	14.8	12.3	11.6	10.9	11.7	15.8
	27	12.8	12.7	12.0	11.7	12.6	15.3
Sept	3	14.7	13.3	13.5	11.7	13.1	14.6
	10	8.3	11.0	8.8	9.0	10.2	12.1
	17	15.2	14.3	13.5	12.2	14.5	17.3
	24	15.9	12.9	12.2	11.7	11.6	15.4

2. ELECTRICAL

Aug	13	11.8	12.6	9.2	7.7	8.1	10.9
	20	12.4	9.3	8.9	8.4	8.9	11.3
	27	11.9	10.4	9.9	9.7	9.2	10.8
Sept	3	10.8	9.7	9.0	9.2	9.9	11.1
	10	7.4	8.7	7.5	8.3	8.5	9.1
	17	14.1	11.6	10.8	10.9	10.0	13.2
	24	11.3	10.8	10.4	8.7	9.9	10.9

3. ERECTION WAYS

Aug	13	15.3	11.9	10.8	9.3	13.9	15.8
	20	16.9	14.3	12.1	10.9	13.9	16.3
	27	14.6	12.8	11.5	10.1	13.6	15.9
Sept	3	13.5	11.7	12.3	10.3	14.5	16.8
	10	10.6	10.3	10.3	9.2	11.3	13.2
	17	18.5	14.2	14.2	13.0	17.9	20.4
	24	16.5	14.1	11.8	11.2	14.3	17.0

4. ERECTION DOCK

Aug	13	13.3	12.4	10.8	10.3	10.6	14.1
	20	10.7	10.3	9.4	7.3	9.4	11.8
	27	10.3	12.5	8.7	6.5	7.8	9.7
Sept	3	9.7	6.9	7.2	7.8	9.6	6.7
	10	7.9	8.1	7.6	5.7	8.9	8.1
	17	10.7	11.4	8.4	8.0	10.4	10.5
	24	10.6	10.7	8.0	8.3	8.7	8.7

5. FABRICATION

Aug	13	13.3	10.3	10.2	10.2	9.9	12.1
	20	13.5	12.4	11.2	9.7	9.2	12.3
	27	12.1	12.3	10.4	10.3	8.8	11.1
Sept	3	12.2	9.6	10.2	9.2	10.4	12.2
	10	9.5	9.0	9.4	8.6	8.7	9.8
	17	12.1	11.1	11.1	10.4	11.1	12.9
	24	13.5	11.9	10.3	10.4	10.4	11.7

II. ABSENTEEISM BY DEPARTMENT
(By Day of Week)

1. ASSEMBLY

W/e	MON	TUES	WED	THURS	FRI	SAT
Aug 13	13.6	11.6	11.1	11.0	11.7	15.2
20	14.8	12.3	11.6	10.9	11.7	15.8
27	12.8	12.7	12.0	11.7	12.6	15.3
Sept 3	14.7	13.3	13.5	11.7	13.1	14.6
10	8.3	11.0	8.8	9.0	10.2	12.1
17	15.2	14.3	13.5	12.2	14.5	17.3
24	15.9	12.9	12.2	11.7	11.6	15.4

2. ELECTRICAL

Aug 13	11.8	12.6	9.2	7.7	8.1	10.9
20	12.4	9.3	8.9	8.4	8.9	11.3
27	11.9	10.4	9.9	9.7	9.2	10.8
Sept 3	10.8	9.7	9.0	9.2	9.9	11.1
10	7.4	8.7	7.5	8.3	8.5	9.1
17	14.1	11.6	10.8	10.9	10.0	13.2
24	11.3	10.8	10.4	8.7	9.9	10.9

3. ERECTION WAYS

Aug 13	15.3	11.9	10.8	9.3	13.9	15.8
20	16.9	14.3	12.1	10.9	13.9	16.3
27	14.6	12.8	11.5	10.1	13.6	15.9
Sept 3	13.5	11.7	12.3	10.3	14.5	16.8
10	10.6	10.3	10.3	9.2	11.3	13.2
17	18.5	14.2	14.2	13.0	17.9	20.4
24	16.5	14.1	11.8	11.2	14.3	17.0

4. ERECTION DOCK

Aug 13	13.3	12.4	10.8	10.3	10.6	14.1
20	10.7	10.3	9.4	7.3	9.4	11.8
27	10.3	12.5	8.7	6.5	7.8	9.7
Sept 3	9.7	6.9	7.2	7.8	9.6	6.7
10	7.9	8.1	7.6	5.7	8.9	8.1
17	10.7	11.4	8.4	8.0	10.4	10.5
24	10.6	10.7	8.0	8.3	8.7	8.7

5. FABRICATION

Aug 13	13.3	10.3	10.2	10.2	9.9	12.1
20	13.5	12.4	11.2	9.7	9.2	12.3
27	12.1	12.3	10.4	10.3	8.8	11.1
Sept 3	12.2	9.6	10.2	9.2	10.4	12.2
10	9.5	9.0	9.4	8.6	8.7	9.8
17	12.1	11.1	11.1	10.4	11.1	12.9
24	13.5	11.9	10.3	10.4	10.4	11.7

II. ABSENTEEISM BY DEPARTMENT (Cont'd.)

6. MARINE

	W/e	MON	TUES	WED	THU	FRI	SAT
Aug	13	10.8	8.9	7.6	7.8	7.6	10.9
	20	11.6	8.6	7.1	6.5	7.5	9.4
	27	10.9	9.8	8.6	8.1	8.5	10.4
Sept	3	10.1	8.4	8.1	6.9	7.6	9.3
	10	6.8	6.8	6.4	5.5	4.9	6.8
	17	11.0	10.2	9.8	9.4	8.7	9.7
	24	10.9	9.3	7.5	7.8	8.9	9.4

7. SHEET METAL

Aug	13	15.4	12.5	10.4	9.3	12.2	12.9
	20	11.7	8.9	8.5	8.6	9.3	10.5
	27	13.1	12.0	8.7	7.9	10.5	13.2
Sept	3	12.5	10.9	9.7	11.9	10.3	12.8
	10	7.2	8.8	10.5	10.5	8.1	10.2
	17	13.1	9.4	9.0	8.5	9.8	13.2
	24	13.1	9.3	9.4	9.8	10.8	12.1

8. MATERIALS

Aug	13	9.4	8.4	8.1	7.3	7.3	8.5
	20	9.4	9.5	8.7	8.5	9.1	10.7
	27	9.9	8.9	7.6	8.8	8.2	9.3
Sept	3	11.1	10.1	9.5	9.4	8.8	11.0
	10	8.0	7.5	7.2	6.4	6.1	8.9
	17	7.9	7.5	7.9	7.7	8.0	9.5
	24	11.7	10.2	9.9	8.5	10.0	10.2

9. MECHANICAL

Aug	13	9.1	9.8	9.9	9.5	9.2	8.8
	20	11.3	8.9	9.7	7.9	10.0	8.3
	27	11.7	9.3	7.3	6.3	6.6	8.7
Sept	3	10.7	9.4	9.7	7.3	7.2	9.3
	10	4.7	5.1	5.7	3.7	6.7	8.1
	17	9.8	9.8	8.7	8.0	9.4	9.3
	24	6.6	7.6	7.6	7.6	9.2	9.6

10. CRANE OPERATORS

Aug	13	3.6	3.6	4.5	2.7	4.5	4.5
	20	5.0	3.2	2.7	3.2	4.8	8.2
	27	5.8	5.8	7.6	6.7	5.4	8.5
Sept	3	9.3	8.9	8.9	8.5	9.8	10.8
	10	6.8	5.9	7.3	5.5	5.1	5.1
	17	5.1	5.1	5.6	3.2	5.1	5.1
	24	8.6	7.7	7.3	6.4	5.1	8.3

II. ABSENTEEISM BY DEPARTMENT (Cont'd.)

11. PAINT DEPARTMENT

W/e	MON	TUE	WED	THU	FRI	SAT
Aug 13	15.0	11.8	10.6	10.5	11.9	15.1
20	13.2	11.1	11.5	9.3	11.0	14.4
27	13.9	12.6	9.7	9.9	10.1	13.1
Sept 3	13.9	12.4	12.8	10.6	11.2	11.0
10	8.4	11.2	10.2	7.5	9.3	10.7
17	15.3	12.8	11.8	11.8	12.8	16.0
24	17.4	13.4	10.2	8.8	12.0	14.6

12. PIPE DEPARTMENT

W/e	MON	TUE	WED	THU	FRI	SAT
Aug 13	12.5	11.6	9.4	8.7	10.2	12.3
20	11.9	10.2	8.4	7.2	7.3	9.3
27	10.9	9.7	8.8	8.6	9.8	10.4
Sept 3	12.9	10.6	9.4	8.1	9.6	11.2
10	9.2	9.9	9.4	8.1	9.5	10.5
17	13.6	11.1	10.3	9.4	11.0	13.3
24	12.4	10.4	9.2	9.0	12.3	12.5

13. RIGGING DEPARTMENT

W/e	MON	TUE	WED	THU	FRI	SAT
Aug 13	10.9	8.3	6.6	8.0	8.9	11.1
20	12.3	11.7	11.1	8.8	9.6	10.9
27	11.7	12.2	8.9	7.8	9.2	10.4
Sept 3	10.6	10.5	10.6	8.9	9.6	11.9
10	8.3	9.4	8.5	7.7	7.9	9.3
17	11.3	10.2	11.1	9.4	10.8	14.4
24	13.8	12.0	11.1	10.1	12.1	13.6

14. RIVETING & CHIPPING

W/e	MON	TUE	WED	THU	FRI	SAT
Aug 13	12.8	11.7	10.3	7.6	11.8	16.0
20	14.3	10.5	8.6	8.6	13.0	17.8
27	12.7	10.6	9.7	7.5	9.7	13.3
Sept 3	12.9	11.0	10.9	7.4	10.9	15.6
10	9.0	8.3	8.0	8.2	12.0	15.2
17	16.8	12.8	11.0	10.0	15.7	20.1
24	15.8	13.1	10.5	8.8	15.0	17.1

15. CARPENTER SHOP SHIPWRIGHTS

W/e	MON	TUE	WED	THU	FRI	SAT
Aug 13	10.3	7.3	4.4	4.0	5.2	9.2
20	4.9	6.9	4.9	4.1	5.7	8.2
27	6.1	4.9	3.7	3.3	4.9	6.9
Sept 3	6.5	6.1	5.3	5.3	5.8	6.6
10	4.5	3.3	4.5	3.7	6.9	6.1
17	7.4	6.6	5.4	4.2	6.7	6.7
24	5.3	5.0	5.8	4.5	7.0	8.2

II. ABSENTEEISM BY DEPARTMENT (Cont'd.)

16. LABOR & SALVAGE

W/e	MON	TUE	WED	THU	FRI	SAT
Aug 13	12.3	11.1	11.7	7.9	8.7	11.9
20	9.7	10.4	7.4	7.6	9.3	12.4
27	10.5	8.5	7.5	4.9	7.8	9.4
Sept 3	10.7	11.8	9.2	6.6	8.3	9.9
10	5.3	9.5	10.3	8.1	8.2	9.2
17	13.6	11.9	10.8	9.2	10.7	14.9
24	13.7	8.6	8.5	7.6	8.6	10.0

17. WELDING WAYS

Aug 13	15.6	12.8	10.7	10.5	13.6	16.9
20	16.6	13.6	12.6	11.3	13.5	16.7
27	16.1	14.8	12.9	9.9	12.6	14.3
Sept 3	13.8	14.2	12.6	10.8	13.7	16.7
10	10.9	12.3	12.0	9.3	12.5	13.8
17	18.2	16.3	13.5	13.3	16.7	20.5
24	16.1	14.4	12.3	12.6	14.5	16.1

18. WELDING DOCK

Aug 13	17.2	13.7	15.3	12.1	16.4	18.4
20	19.9	14.9	13.2	11.8	12.3	16.1
27	16.1	15.7	16.2	13.9	15.8	17.1
Sept 3	16.3	15.6	15.1	15.3	14.3	13.6
10	6.8	8.7	8.4	11.4	11.5	12.8
17	14.6	15.5	12.4	13.5	14.3	17.1
24	14.0	14.7	10.9	12.6	12.9	15.3

19. PIPE WELDING

Aug 13	15.8	14.0	13.8	9.2	12.4	16.2
20	14.3	13.8	10.8	9.7	11.1	14.5
27	15.1	12.3	12.9	10.6	12.9	15.1
Sept 3	17.8	12.6	13.6	12.1	12.6	15.0
10	9.8	11.3	10.9	9.7	10.4	13.0
17	16.4	13.3	11.0	11.9	14.7	15.2
24	15.9	13.3	9.7	9.7	14.1	15.5

20. ADMINISTRATION

Aug 13	9.6	8.7	8.1	7.5	8.5	11.2
20	8.7	9.5	7.9	7.9	8.5	11.5
27	11.1	9.2	816	7.9	6.8	9.5
Sept 3	8.8	7.3	7.7	8.2	7.3	9.1
10	7.3	7.7	5.9	6.4	6.1	8.1
17	11.7	10.2	8.8	9.1	8.3	12.2
24	10.6	9.6	8.5	8.6	8.4	10.7

Calship - "Trends in employment" study
via BLS

ANALYSIS OF LENGTH OF SERVICE OF EMPLOYEES TERMINATED BY MONTH

Month	Percentage October	September	August	July	June
0-1	11.4	9.2	10.2	8.5	5.8
1-2	16.0	17.1	15.7	12.6	10.5
2-3	12.4	10.5	18.6	9.6	7.3
3-4	7.5	14.6	6.3	6.4	5.6
4-5	5.7	5.5	3.8	4.8	4.2
5-6	4.7	4.3	3.5	4.0	2.8
6-7	3.5	2.5	2.8	2.8	2.4
7-8	2.5	2.5	1.7	2.3	4.0
8-9	~~2~~62.6	1.6	1.6	3.8	3.6
9-10	1.7	1.2	1.8	2.9	2.5
10-11	1.5	2.0	1.9	2.4	4.0 ✓
11-12	1.7	1.5	2.1	3.8	2.3
1 to 2 years	~~462~~ 15.8	~~373~~ 15.7	~~556~~ 17.1	~~472~~ 18.8	~~715~~ 22.0
2 years and over	13.0	11.8	12.9	17.3	23.0
Totals	100.0 all way across				

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	Percentage				
Month	October	September	August	July	June
0-1	11.4	9.2	10.2	8.5	5.8
1-2	16.0	17.1	15.7	12.6	10.5
2-3	12.4	10.5	18.6	9.6	7.3
3-4	7.5	14.6	6.3	6.4	5.6
4-5	5.7	5.5	3.8	4.8	4.2
5-6	4.7	4.3	3.5	4.0	2.8
6-7	3.5	2.5	2.8	2.8	2.4
7-8	2.5	2.5	1.7	2.3	4.0
8-9	~~2~~2.6	1.6	1.6	3.8	3.6
9[illegible]10	1.7	1.2	1.8	2.9	2.5
1[illegible]11	1.5	2.0	1.9	2.4	4.0 ✓
11-12	1.7	1.5	2.1	3.8	2.3
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2 years and over	13.0	11.8	12.9	17.3	23.0
Totals	100.0 all way across				

/ LABOR TURNOVER BY SEX

	1943	1944									
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Men Terminations	2325	3185	2178	2370	2285	2287	2421	1762	2362	2125	2030
Women Terminations	703	862	656	912	755	868	832	735	883	894	891
Men Average Force	33253	32040	30923	29869	28714	27824	26759	26771	26594	26722	27288
Women Average Force	6442	6053	6335	6538	6755	7107	7228	7570	7707	7584	7365
Women Percentages	10.9	14.2	10.3	13.9	11.2	12.2	11.5	9.7	11.5	11.8	12.1
Men Percentages	7.0	9.9	7.0	7.9	8.0	8.2	9.0	6.6	8.9	7.9	7.4
Total Percen Percentages	7.6	10.6	7.6	9.0	8.6	9.0	9.6	7.3	9.5	8.8	8.4

Total	6 Month's Turnover Average, January - June, 1944	9.1%
Women	6 Month's Turnover Average, January - June, 1944	12.2%
Men	6 Month's Turnover Average, January - June, 1944	8.4%

ABSENTEEISM BY SEX

		1943			1944									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Daily Average * Absentees	F	538	572	821	702	840	756	769	818	818	833	797	884	920
	M	1960	1764	2395	2163	2361	1997	1931	1863	1806	1740	1731	2039	2190
Average Scheduled * Manshifts	F	5023	5324	5459	5658	6165	6385	6596	6936	7056	7395	7500	7397	7167
	M	29102	28477	28643	30199	30417	29435	28295	27421	26358	26385	26251	26278	26819
Female		10.7	10.7	15.0	12.4	13.6	11.8	11.7	11.8	11.6	11.3	10.6	11.9	12.8
Male		6.7	6.2	8.4	7.2	7.8	6.8	6.8	6.8	6.9	6.6	6.6	7.8	8.2

* Daily Average for Month

Vacations, Leaves of Absence deducted from above data

UTILIZATION OF WOMEN

End of Month Figures

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Total Force All Employees	37300	37057	35862	35165	14491	34121	34415	34121	34744	35088
Total Female Employees	6052	6531	6658	6934	7149	7456	7648	7631	7514	7187
Total Women in Crafts	4177	4577	4696	4935	4961	5265	5574	5579	5587	5050
Negro Women	1264	1488	1329	1382	1354	1516	1558	1564	1491	1322
% Women in Crafts to Total Women	69.0	70.1	70.5	71.2	69.4	70.6	72.9	73.1	74.4	70.3
% Negro Women to Total Women	20.9	22.8	20.0	19.9	18.9	20.3	20.4	20.5	19.8	18.4
% Negro Women to Women in Crafts	30.3	32.5	28.3	28.0	27.3	28.8	28.0	28.0	26.7	26.2
% Women to Total Force	16.2	17.6	18.6	19.7	20.7	21.8	22.2	22.5	21.6	20.5

The attached tables and charts show the results of a study designed to provide an analysis of our force by length of service. The data for this study were supplied by the IBM departments.

Facts revealed by this study are:

1. 34.6 percent of the persons last hired in March 1942 are still on the payroll at the present time. (page 5)

2. Average length of continuous service of our present force is 11.9 months with that of females averaging 10.0 months. (page 7)

3. Exempt employes (300,000 codes) have a higher average length of service (20.4 months) than those in either the Clerical or Vessels codes. (page 7)

4. 94 percent of the foremen, 88 percent of the leadmen, 41 percent of the journeyman, and 22 percent of the Helpers have been on the payroll for more than one year. (page 9)

5. 79 percent of the Exempt personnel have been on the payroll for more than one year compared with 48 percent of the Clerical and 43 percent of the Vessels personnel. (page 10)

6. The average length of service of journeymen ranges from 7.6 months for chippers to 16.2 months for material expediters. (page 16)

TOTAL ACCESSIONS BY MONTH, PRESENT FORCE BY MONTH AND PERCENT OF MONTHLY ACCESSIONS REMAINING ON PAYROLL

As of August 15, 1944

		Accessions	Number Remaining on payroll	Percent Remaining on payroll
1942	March	246	85	34.6
	April	707	149	21.1
	May	1255	163	13.0
	June	2748	327	11.9
	July	2547	377	14.8
	August	3784	580	15.3
	September	4923	844	17.1
	October	6816	963	14.1
	November	4831	703	14.6
	December	4031	493	12.2
1943	January	5130	621	12.1
	February	5820	818	14.1
	March	4980	703	14.1
	April	4851	656	13.5
	May	5269	690	13.1
	June	6353	876	13.8
	July	4340	740	17.1
	August	3768	710	18.8
	September	3690	801	21.7
	October	3972	934	23.5
	November	3517	862	24.5
	December	3521	748	21.2
1944	January	2426	607	25.0
	February	2586	815	31.5
	March	3123	1042	33.4
	April	2483	981	39.5
	May	2073	1120	54.0
	June	3458	2088	60.4
	July	2538	2002	78.9

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WOMEN'S BUREAU
U.S. Department of Labor
Washington

September 8, 1942

WOMEN IN FARM OCCUPATIONS

Women were about 13 percent of all farm workers in April, 1942, compared to 5.8 percent at the time of the decennial census in April 1940. By the summer of 1942 the number of women working in agriculture was estimated at 1.5 million.

Agricultural work varies so much from one season to another, and from one day to another, that it is difficult to distinguish occupations done by women. Numbers of women are hired even in ordinary times to help with the harvesting of the crops. In fact, for crops which require a large number of man hours within a very short period all local labor available is usually in demand. This year women have been hired to pick, grade and pack berries and fruits, to harvest nuts, to cut, pick and crate beans, lettuce, cauliflower, spinach and other vegetables, to shock wheat, oats and other grains, to thin and hoe beets, to set out celery and tomato plants, to pit apricots. Considerable interest was aroused by the employment of numbers of women in the corn area for detasseling hybrid corn.

Another group of women who form a part of the farm labor force are the farm women - wives, daughters or other female relatives of farm operators. Ordinarily fully occupied, they have nevertheless turned their hands to whatever farm work was pressing, either assisting in urgent work, or doing one type of work so that the operator himself could be released for other heavier work. They ride the combine, releasing a man for cultivating, or they cultivate with mules and cultivator; they cut and shock grain. Many other duties have been undertaken by the farm woman as need required this year: Hoeing vegetables, driving the tractor, running the mower, hayrake, binder or other farm machinery, blocking and thinning sugar beets, driving livestock to and from pasture, and performing various other jobs.

A small proportion of the women in farm work are farm operators, such as the Pennsylvania woman who operates 140 acres, raising cattle and pigs and growing potatoes, corn and other crops. In another instance, several women own a farm and do all the work, milking the cows, separating cream and making butter, feeding and caring for livestock and poultry, planting and cultivating crops. A woman entered a new field as farm operator in the growing of belladonna, which involves much hand labor on a small area, and she hires women employees. Such women farm operators are the exception, however, and constitute only a small proportion of the women working on farms, in peak periods.

Though there is little farm work to which women have not turned their hands, in general work on dairy farms, fruit and vegetable farms, or in poultry raising is considered most suited to them.

JH:ld

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
WASHINGTON

March 17, 1943

MEMORANDUM

To: Mr. Stanley H. Kershaw, Director
Home and Farm Safety Division
National Safety Council

From: Mary Anderson, Director

Subject: Safety for the Crop Corps: Heavy Work, Hours of Work

Safety for the Crop Corps is excellent in its discussion of machine hazards and dangers in handling livestock. A section should be given to prevention of injury from strains and sprains due to overlifting. It is in this field of labor that women differ most from men - their inability to lift heavy weights. Since some part of the farm worker's job is likely to include lifting, instruction should be given in correct methods of lifting and carrying. I suggest including on page 6 before Machinery the following section:

Lifting and Carrying without Strain .

Improper methods of lifting and carrying can cause severe injury to back or abdominal muscles. If the following principals are carefully followed injury and excessive fatigue can be prevented:

1. When lifting from a low level keep your back straight, bend your knees and lift.
2. Never lift while in an awkward position.
3. Be sure you have good footing.
4. Try the load first. Do not jerk on it. If it is beyond your strength get help.
5. When lifting with another person make sure you both lift at the same time and let the load down together.
6. Wipe grease or oil from your hands before lifting.

Hours of Work

In our memorandum of February 26, 1943, we called attention to the fact that the original draft of the three safety pamphlets failed to mention the importance of reasonable working hours for women employed on farms. As this suggestion has not been incorporated in the revised pamphlets, we would again like to point out the desirability of giving the farmer information of this kind. As we said before, it may not be practicable to set any definite limitation on daily hours for farm work, but the point should be made that women workers are most efficient if they are employed moderate hours, with sufficient time for rest and meals, and one day off in seven.

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MTM:AA:ml

February 26, 1943

MEMORANDUM

To: Mr. Stanley H. Kershaw
Director, Home and Farm Safety Division
National Safety Council

From: Mary Anderson

Re: Tentative Drafts of Three Farm Safety Leaflets: "Going to the Farm Front," "Start Them Right," and "Safeguarding the Land Army."

We have reviewed the contents of the above-entitled leaflets which are designed to promote safety for inexperienced farm workers. I believe the leaflets serve a useful purpose, and the Women's Bureau will be glad to endorse the general policy they express and to assist in giving them wide distribution.

Women and minor workers together make up the largest potential source of inexperienced farm labor for the coming season. Furthermore, a large number of the minor workers will be young girls, whose needs will be to a large extent similar to, or identical with, the needs of employed women. In order for the leaflets to meet the safety needs of women and girls employed on farms, adequate information on the following subjects seems to us especially important: (1) working hours, including time for rest and recreation; (2) weight lifting; (3) clothing.

1. Working Hours: In the three leaflets, attention is called to the need for "breaking in" the inexperienced worker and not assigning tasks of which the worker is physically incapable. In the leaflet intended for the farmer, the additional point should be made that even workers who are physically sound and doing work entirely within their strength eventually reach a point where extreme fatigue and possible exhaustion follow. In general, the 8-hour day is most desirable, because it not only safeguards the worker from fatigue but it also has been found most productive in output. An absolute limitation may not be practicable in farm work, but the need for moderation should be stressed in all three booklets. Sufficient time should be given for rest and meals and one day of rest a week is absolutely essential, although where the worker lives on the farm, ~~xxxxxxx~~ an exception may be made for light chores on the 7th day.

It is accordingly suggested that in the leaflet "Start Them Right," paragraph 3, which relates to the worker's physical capacity should be expanded to deal with working hours and recreation. After the 5th sentence, which reads "Persons who become overly tired because their duties are too difficult do not work efficiently," it is suggested that the following statement be added:

> "The same is true if their working hours are too long, or if they do not have sufficient time for meals, rest, and recreation."

In the same leaflet, after paragraph 7 of the "Farm Safety Pledge," which reads "I will give my helper only work that he is physically able to perform efficiently and safely," it is suggested that a new paragraph be added as follows:

> "I will give him work which can be performed in a moderate workday, and will see that he has adequate time for rest and recreation. Above all, I will not expect him to do more than light chores on the 7th day."

2. Weight Lifting: Women and girls are peculiarly susceptible to injuries caused by heavy lifting. At the conference in the Children's Bureau office on February 24, a paragraph on weight lifting was incorporated in the leaflet "Going to the Farm Front," but the subject apparently has not been dealt with in the other two leaflets. In the leaflet addressed to the farmer, "Start Them Right,"a word of caution should be inserted against requiring women to do work which involves lifting beyond their strength. In the leaflet, "Safeguarding the Land Army"; we suggest that the topic on page 3, "Blisters, Bruises and Cuts" be enlarged to include "Strains." Advice on the proper method of weight lifting and caution against lifting excess weights could then be inserted.

An alternative arrangement would be to insert such material under the topic "Around the Farmstead" on page 3, but this is not recommended as weight lifting must also be considered in connection with field work - a subject which is not discussed under a separate heading in the leaflet.

3. Clothing: If women are to perform farm work efficiently, proper and adequate clothing is essential. The information on clothing will be most useful to women workers if it is expressly related to the types of hazards to be avoided. The present wording of the leaflets fails to do this. The leaflets also overlook the fact that clothing should provide adequate covering as well as fit properly. Certain clothing mentioned in the present leaflet,"Safeguarding the Land Army," would not be suitable for women farm workers because it would fail to provide sufficient protection against sunburn, cuts,and bruises.

Hazards from natural causes as well as from machinery have been taken into consideration in the following discussion of clothing, which is suggested as a substitute for page 2 of the leaflet "Safeguarding the Land Army":

> "Farm work calls for wearing clothes suitable for the job. Clothing made for men isn't satisfactory for women because it doesn't fit comfortably. At the same time, floppy, loose-fitting clothes are out of order. There is too much danger of dangling projections catching and causing injury to the wearer.

"Trouser-like type garments are more suitable for most types of farm work than dresses, particularly for work in the fields or around machinery. Coveralls or slacks are preferable to shorts because they furnish protection against sunburn. The legs should be tapered, without cuffs. Shirts with either short or long sleeves and close-fitting necks protect arms and shoulders. Shirts should be worn tucked in - loose hanging jackets are dangerous. Other safety features generally recognized as essential because they avoid catching on external objects are sewed-in belts and inserted pockets (instead of the patch type). Non-metallic buttons, buckles, and fastenings of all kinds are desirable because they do less damage if pulled off.

"Complete uniforms include suitable head coverings. For general farm work, broad-brimmed hats protect the face and neck from sunburn as well as confine the hair. For certain types of work where hats might be in the way, such as picking fuit off trees, caps with visors to shade the eyes from glare are preferable to turbans or kerchiefs wrapped around the hair.

"Low-heeled shoes should be worn for all types of work. Shoes the arch and
should have durable leather soles and leather uppers so they will support /
protect the foot from cuts and bruises. Canvas shoes with thin rubber soles, such as the tennis shoe, are not suitable for work that involves stepping on stones and stubble and walking on rough ground. Open-toed shoes should not be worn.

"Jewelry is not suitable for wear on farm work, and may be dangerous around machinery."

No change is suggested in the paragraph on gloves.

send 202
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shbdg

Women's Effective War Work

Requires

Time for Meals and Rest

Maximum war production is the goal of both labor and management.

Efficiency depends on health. Medical science and production records establish this fact.

Safeguards to health include a lunch period in every shift of 6 hours or more, and a rest in every work period of 4 hours.

These are standards essential to maintain the worker's efficiency.

* * *

WOMEN'S BUREAU
U. S. DEPARTMENT OF LABOR
Special Bulletin No. 5

May 1942

MEALS AND WORK

For Health and Output, Workers Need Adequate Meal Time

Not Less Than a 30-Minute Lunch

A lunch period is too short if it does not give the worker time to leave the workroom, wash, and eat a well-balanced lunch and have a few minutes for leisure afterward. Half an hour is sufficient if washing facilities and lunchrooms are conveniently located. (If work ends for the day in 6 hours or less and facilities for refreshment such as milk and sandwiches are provided in the rest period of 10 to 15 minutes, the shorter break will be sufficient.)

Over 30 Minutes May Be Needed

Workers handling harmful substances or exposed to harmful fumes or dusts should be given extra time before lunch for thorough washing. In some cases time for changing work clothes may be necessary to prevent serious cases of poisoning.

If the lunchroom is inadequate to serve the expanding force with dispatch, or if it is distant from the workroom, additional time should be allowed or provision made for carts with hot food to serve lunches at convenient points *outside of workrooms.*

Better Nutrition Means Better Work

The diets of many workers' families are below the margin of safety as regards essential nutrients. This is shown by scientific studies of the U. S. Bureau of Home Economics. If sufficient time is given to eat a lunch selected from a well-planned menu, the work capacity of employees can be increased. This may also reduce industrial accidents and lessen absenteeism.

WORK AND REST

Rest Periods Increase Output

Rest pauses greatly increase health and output. They are universal in England. Their full value may not appear at once; it will show up in a few months.

10 Minutes of Rest per 4-Hour Spell

Five to ten minutes' rest at the middle of the work spell increases output by 5 to 10 percent, according to British authorities after 18 years' investigation. Numerous plants in this country show similar results. The more tiring and monotonous the work, the greater the increase resulting from a rest.

Rest Need Varies With Conditions

Try-outs must determine the best rest pause. Ten minutes in the middle of each 4-hour spell usually is adequate if facilities for rest and refreshment are convenient. Heavier or more trying tasks may require longer or more frequent pauses. Chance should be given for change of posture at work—sitting if the job requires standing, movement if it requires sitting.

The worker cannot maintain output under excessive speed-up. In an unbroken 4 hours a worker necessarily pauses for several minutes an hour. Time lost by such pauses is reduced by organized rest times.

Rest Pauses No Substitute for Healthful Work Conditions

Rest periods are only part of a program for health in industry. Alone they cannot offset fatigue from added overtime, excessive speed-up, constant standing, improper seats, noise, poor ventilation, inadequate lighting. Attention must be given all these points if fullest output is to be gained.

STATE REGULATIONS

Twenty-two States require employers in manufacturing occupations to allow time for meals or rest, or both. The period varies from 30 minutes to 1 hour. Sixteen States (starred) specify a maximum number of hours, usually 5 or 6, beyond which no employee may work without a pause for rest or meal.

* Arkansas
California
* Delaware
Indiana
* Kansas
* Kentucky
* Louisiana
* Maine
* Maryland
* Massachusetts
Nebraska
Nevada
* New Jersey
New Mexico
* New York
* North Dakota
* Ohio
* Oregon
* Pennsylvania
* Utah
Wisconsin
* District of Columbia

DEPARTMENT OF LABOR
UNITED STATES OF AMERICA

U. S. DEPARTMENT OF AGRICULTURE
~~WAR FOOD ADMINISTRATION~~
~~COMMODITY CREDIT CORPORATION~~
WASHINGTON 25, D. C.

Production and Marketing Administration

November 8, [illegible]

Miss Jennie Mohr
Associate Industrial Economist
Women's Bureau
Department of Labor
Washington 25, D. C.

Dear Miss Mohr:

Following up Mr. Lowenthal's recent conversation with you we are enclosing sample poster recently released, also flier giving information on the film, Something You Didn't Eat, now available for non-theatrical showings.

Sincerely,

Robert C. Davenport
Robert C. Davenport, Acting Chief,
Industrial Feeding Division
Food Distribution Programs Branch

Enclosures-2

A DAY'S PATTE
FOR GOOD EATI
FROM THE "BASIC 7" –

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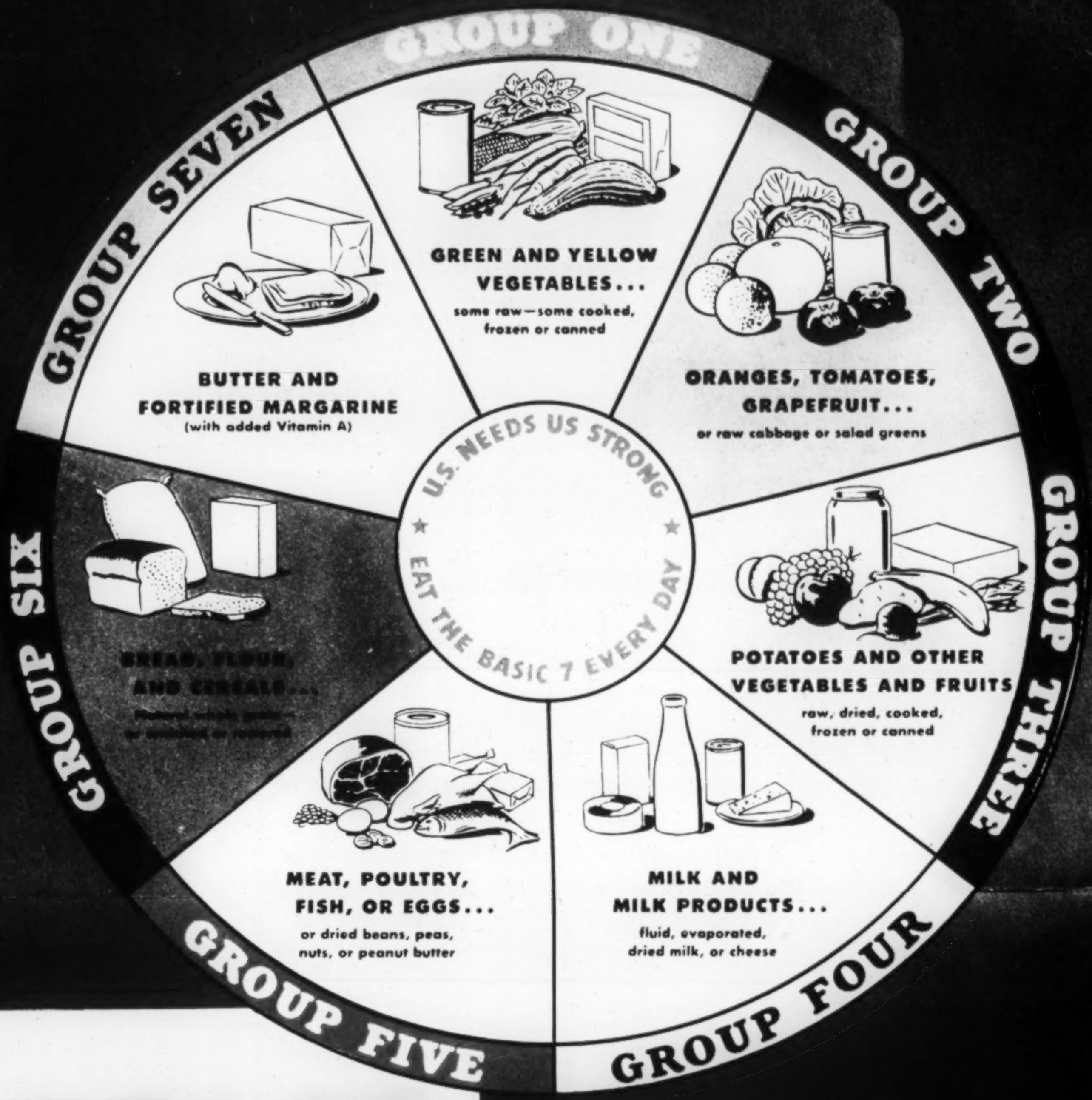

GROUP ONE
GREEN AND YELLOW VEGETABLES...
some raw—some cooked, frozen or canned
GROUP TWO
ORANGES, TOMATOES, GRAPEFRUIT...
or raw cabbage or salad greens
GROUP THREE
POTATOES AND OTHER VEGETABLES AND FRUITS
raw, dried, cooked, frozen or canned
GROUP FOUR
MILK AND MILK PRODUCTS...
fluid, evaporated, dried milk, or cheese
GROUP FIVE
MEAT, POULTRY, FISH, OR EGGS...
or dried beans, peas, nuts, or peanut butter
GROUP SIX
BREAD, FLOUR, AND CEREALS...
Natural whole grain— or enriched or restored
GROUP SEVEN
BUTTER AND FORTIFIED MARGARINE
(with added Vitamin A)
U.S. NEEDS US STRONG
EAT THE BASIC 7 EVERY DAY

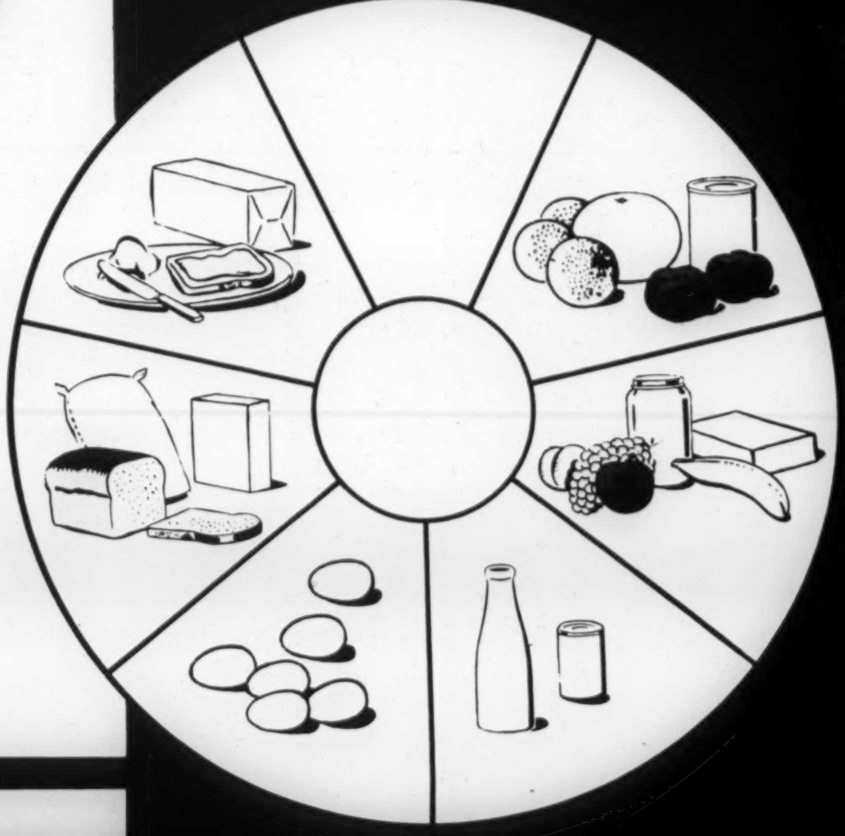
BREAKFAST

FRUIT

CEREAL with MILK

BREAD BUTTER
(Fortified Margarine)

BEVERAGE



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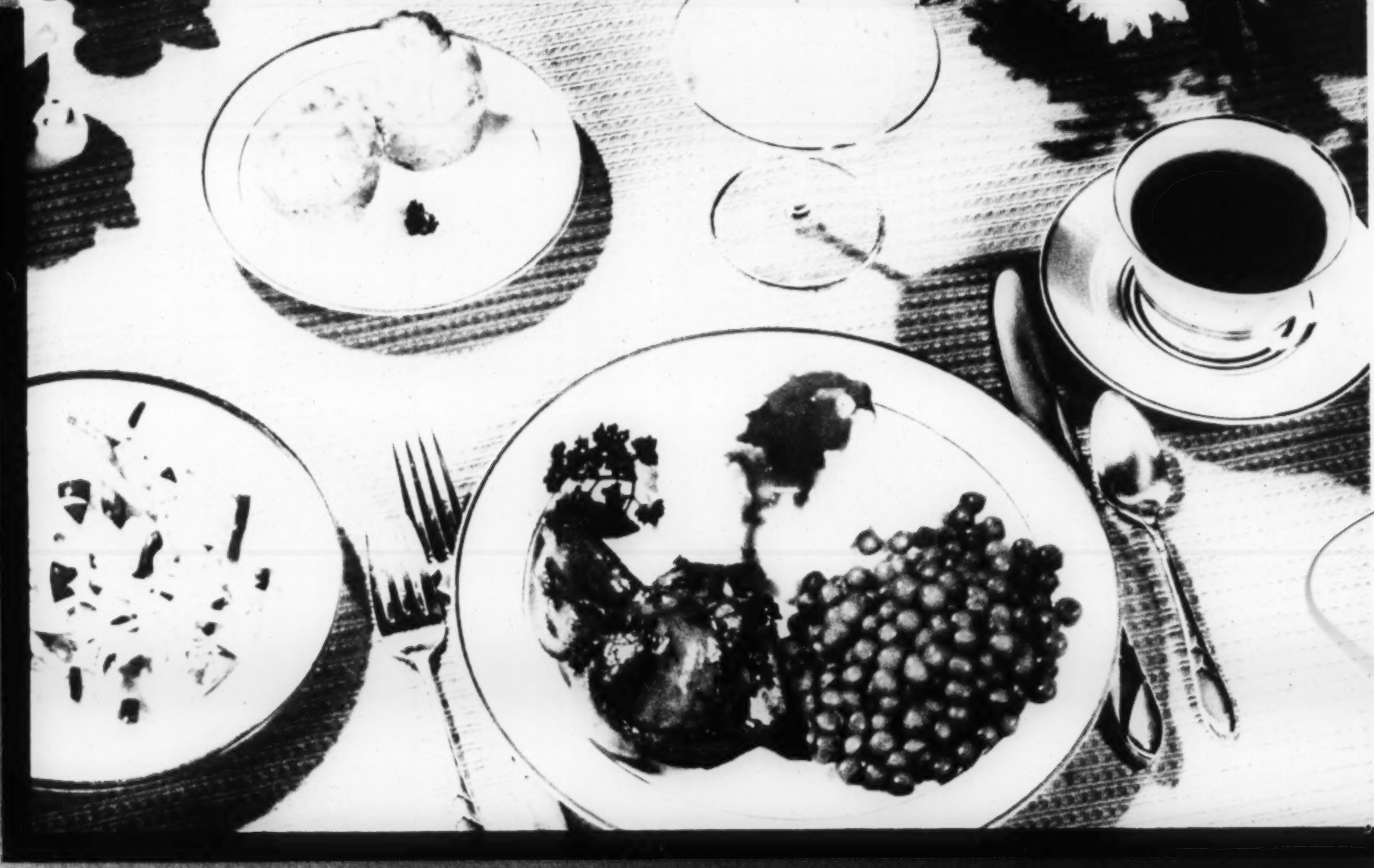

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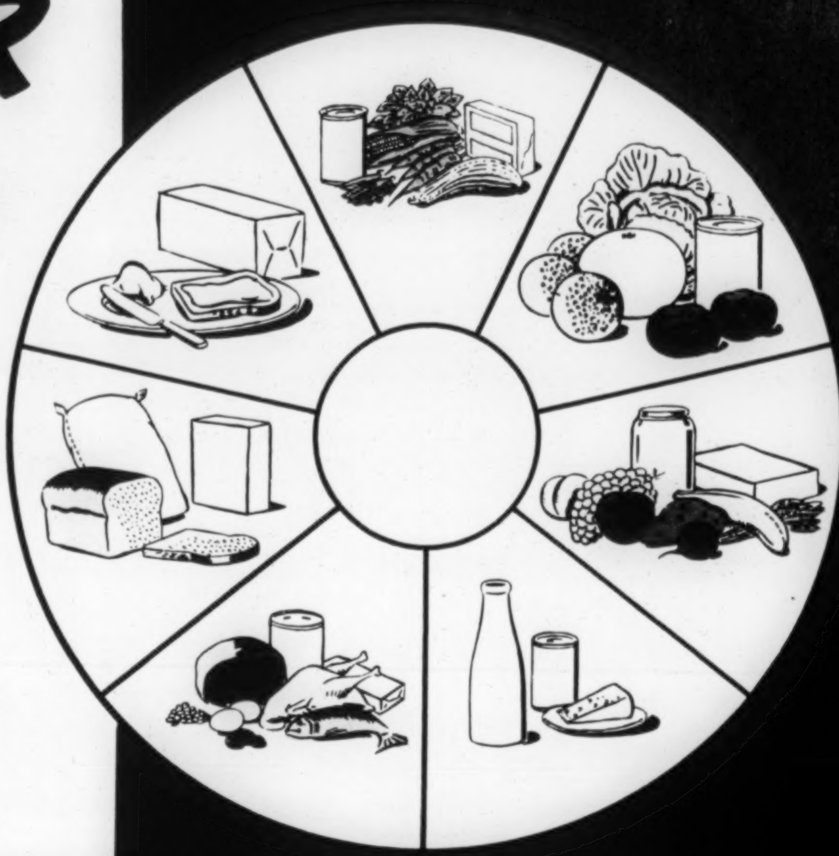
U. S. GOVERNMENT PRINTING OFFICE : 1945 -O- 651107

U. S. GOVERNMENT CHART • U. S.

LUNCH OR SUPPER



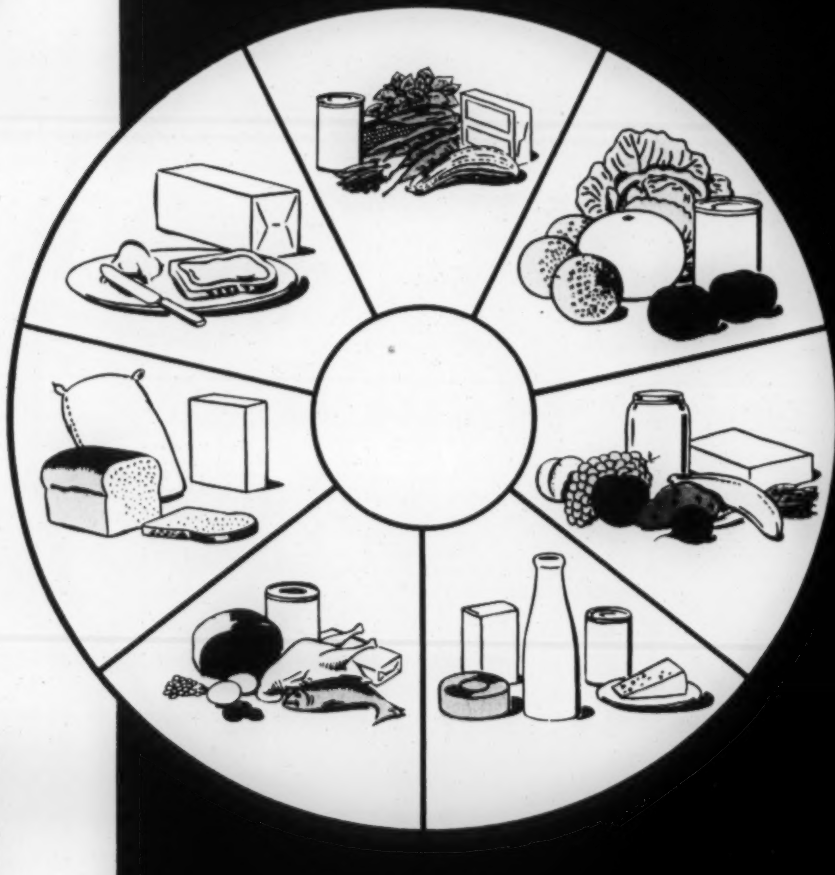
MEAT · POULTRY · FISH · EGGS
CHEESE (Main Dish or Sandwich)

VEGETABLE – Cooked or Raw
(GREEN or YELLOW)

BREAD
BUTTER
(Fortified Margarine)

FRUIT
MILK

DINNER



MEAT · POULTRY · FISH
EGGS · CHEESE

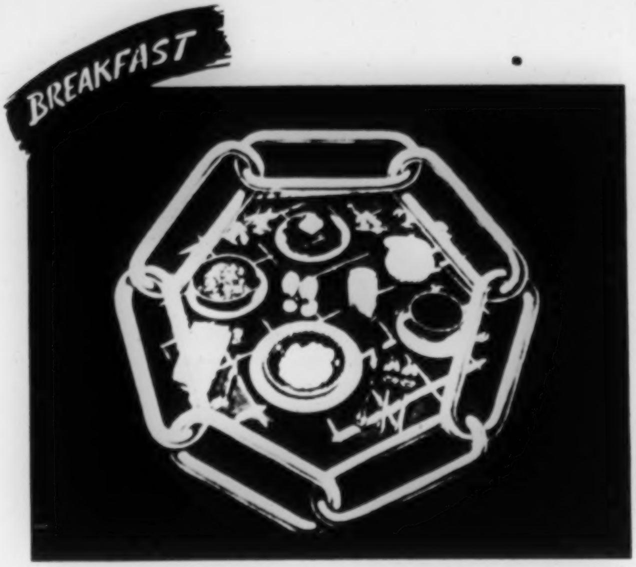
POTATO
VEGETABLE

SALAD

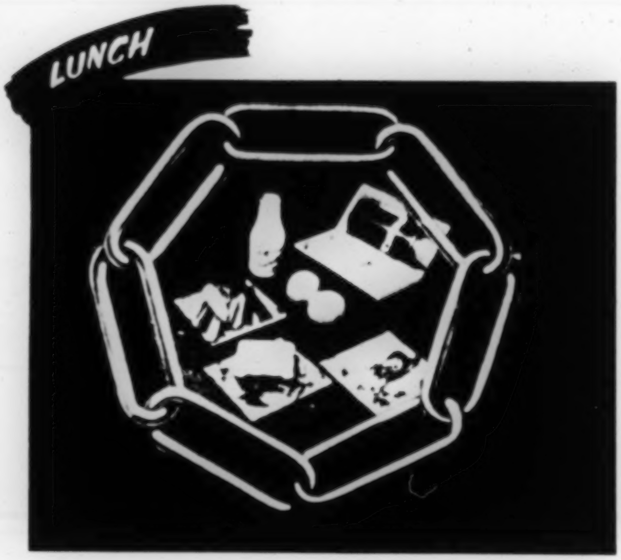
BREAD
BUTTER
(Fortified Margarine)

DESSERT
BEVERAGE

S. DEPAR [illegible]



Well, here's a breakfast Mrs. Jones might select from the chart. From group two—orange juice. From group six—cereal. From group four—milk. From group five—soft-boiled eggs. From group seven—butter or fortified margarine. That should start the day off right.



Now let's see what the chart provides for pop's lunch box. From group one—green and yellow vegetables. From group four—milk. From group five—meat and from group six—bread for sandwiches. And from group three—apples for apple pie. That should hold him till evening.

And as for dinner. Well, pot roast with browned potatoes and vegetables, cole slaw salad, hot biscuits, topped off with some fruit, that ought to hit the spot!

Here's food for thought, Mrs. Jones. When you plan your meals you are more than a housewife doing a daily chore—You are a skilled architect—building a family with vigorous bodies and alert minds able to get the most out of living. Yes, by using the Basic Seven you can keep the nation strong and free from the threat of "something you didn't eat."

Theater Showings in Your City—And How You Can Help

SOMETHING YOU DIDN'T EAT is being shown in some theaters beginning June 28 and during July and August, continuing in other theaters for about 20 weeks.

Before SOMETHING YOU DIDN'T EAT is scheduled to be shown in your community theater, see your theater manager and offer your cooperation in interesting nutrition committee members and nutrition-minded people in promoting a big turn-out when the picture is shown.

Help make the most of the film's nutritional message.

Get copies of the "National Wartime Nutrition Guide" for distribution to interested persons.

Exhibit "Basic Seven" food-chart posters in your public library, your post office, and in other public places.

Arrange tie-in nutritional exhibits in the theater lobby, in stores, in the schools, in the library. Food stores especially should be interested in cooperating by arranging tie-in window and floor displays.

See the schools about nutritional essay contests.

Almost every theater owner in the United States is cooperating with the War Activities Committee of the Motion Picture Industry by showing "war films." This is one of them. If your theater manager has not already shown SOMETHING YOU DIDN'T EAT, ask him when it is scheduled. If he hasn't scheduled it, ask him to get in touch with the nearest Warner Bros. Exchange immediately. He can obtain the film without charge.

Offer your cooperation. Emphasize the importance of the nutritional message and explain the help that you and your group can give in contributing to the success of the performance by promoting the picture by means of tie-in exhibits, posters, talks, and nutritional literature.

Arrange Non Theatrical Showings after September 1

Get your nutrition committee together before September 1 when 16-mm. prints of SOMETHING YOU DIDN'T EAT will be available for showings to interested groups. Because of the limited number of prints available, it is advisable to plan your showing well in advance. In that way you also have opportunity to arrange for much the same sort of tie-in exhibits, posters, and literature that are applicable to the theater showings. Plan food demonstrations using available foods. Contact leaders of groups that might be interested in seeing this film by Walt Disney Productions. Arrange a tentative date or preferably a series of tentative dates so that if the film is not available on the date of your first choice, it may be available on a later date.

Possible Audiences

SOMETHING YOU DIDN'T EAT will prove of real interest to:

- Nutrition meetings
- Luncheon clubs
- Women's groups
- Farm groups
- Labor groups
- Fraternal societies
- Civic organizations
- Church groups
- Schools
- Colleges

How to Obtain the Film

Prints of SOMETHING YOU DIDN'T EAT in 16-mm. size are available, on loan, to any group interested in showing the picture. Apply to:

Office of Information
U. S. Department of Agriculture
Washington 25, D. C.

Something you didn't eat

THE STORY OF NUTRITION

★

Produced by

Walt Disney Productions

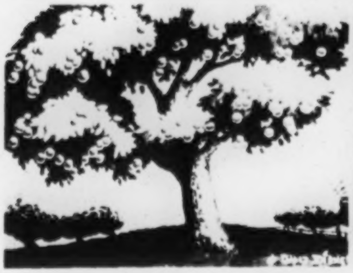
★

Filmed in Technicolor

U.S. NEEDS US STRONG
★ ★
EAT THE BASIC 7 EVERY DAY

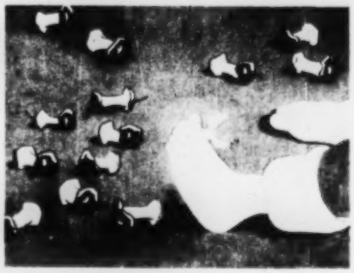
Sponsored by the Office of War Information and the War Activities Committee of the Motion Picture Industry in behalf of the U. S. Department of Agriculture.

HIGHLIGHTS FROM THE FILM "SOMETHING YOU D

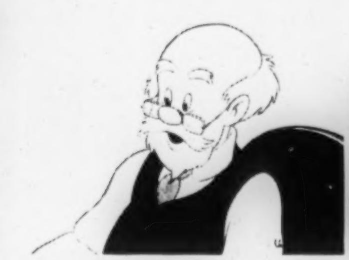


Let your mem'ry take you backwards,
Back to days when you were young
To the time you saw that apple tree
With luscious apples hung.
Now those apples were a little green.

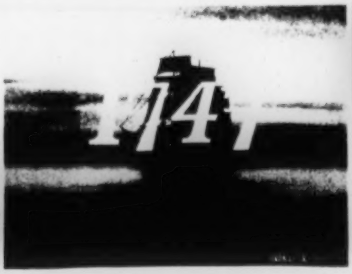
And you well understood,
Green apples were forbidden fruit.
But, gosh . . . they tasted good!



Well, a dozen apples later,
To your rather great surprise,
Green spots and purple polka dots
Went dancing past your eyes.



Then everything went hazy,
And the next thing that you knew,
The face of old Doc Jenkins
Was alooking down at you;
"I think you'll live," the doctor said,
"We needn't operate,
Simply just another case
Of 'something that you ate'."



How many of us ever consider the other side of the picture—the results of "something you didn't eat." Let's go back in history for a moment. The year is 1747; aboard the English Frigate, *The Salisbury*, an all too familiar ceremony is being held—burial at sea.

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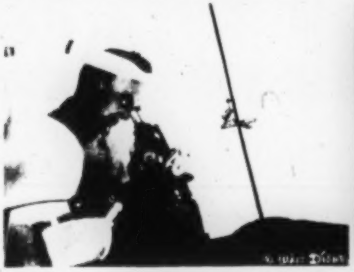
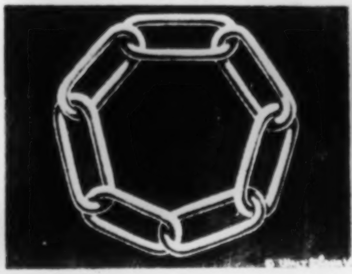
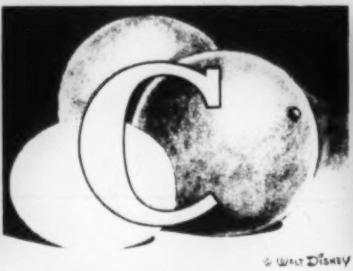


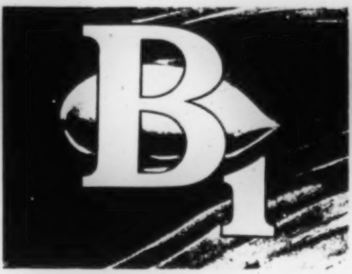
Twentieth century science has taken the discoveries of pioneers like Lind and Eijkmann—plus a great many discoveries made since then—and arrived at definite facts linking food to health—



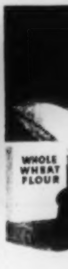
There are various types of foods, each one containing substances essential to health . . . to build up a well-rounded diet. These foods interlock like the links of a chain. Omit a single one of these necessary substances, and the chain snaps.



We know now that Lind had discovered a weak link in that chain; and that the "something" in oranges and lemons which repaired this link was vitamin C—found not only in citrus fruits, but also in tomatoes, raw cabbage and salad greens.



Yes, and we know today that Dr. Eijkmann had discovered Vitamin B_1—found in *all* grains and in their products—



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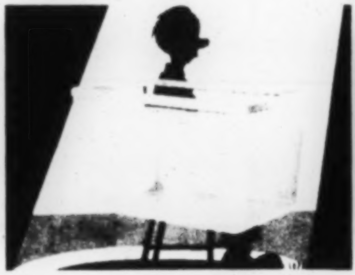
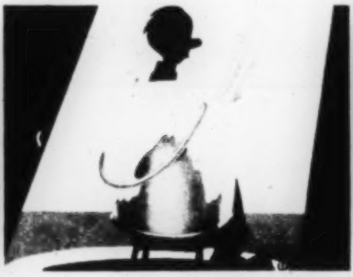
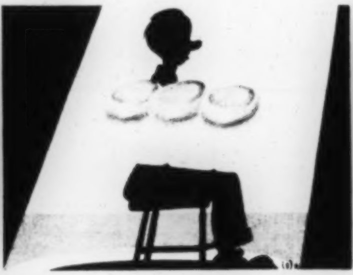


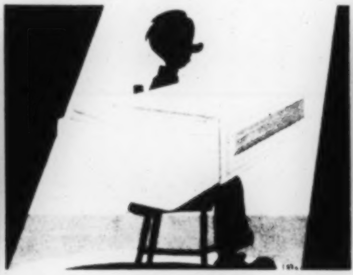
Now such symptoms can arise from other causes, but very often they are signals—danger signals which warn of wrong eating habits. To understand this, let's look at Mr. Jones. We find he is made up of:—About fifty quarts of water—enough to fill a small aquarium.



Enough calcium to whitewash a chicken coop.



Enough fat to make seven bars of soap.



Sufficient sulphur and phosphorus to make a box of matches.

Enou
nail.

U DIDN'T EAT" BY WALT DISNEY PRODUCTIONS

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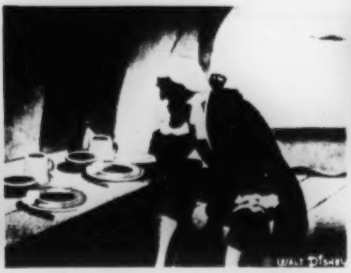
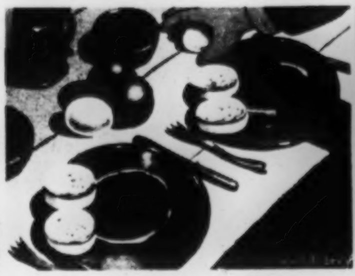
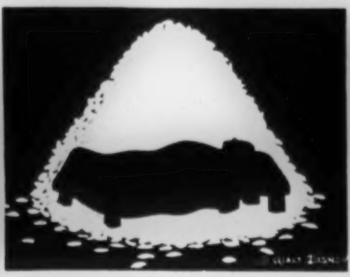


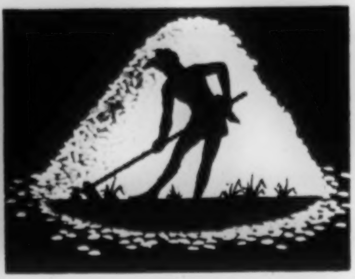
Scurvy, that mysterious malady, has struck again. Dr. Lind, the ship's surgeon, is puzzled. He feels sure there is some connection between scurvy and the food the men eat. But what can it be? Meat—Broth—Biscuits—Men should thrive on this.



He tries an experiment. Each day two of these men have two oranges and a lemon added to their diet. But before six days have passed these men have recovered. In the words of Dr. Lind, "The most sudden and visible good effects were perceived."



In 1890, while investigating the tropical disease, beri-beri, Dr. Eijkmann, a physician in Java, made another astounding discovery. Natives who lived on a diet of polished rice sickened and died.



But those whose diet was changed to include unpolished whole-grain rice staged an almost miraculous recovery! This time the conclusion was obvious: Something within the thin husk of a grain of rice was essential to health.

Dr.
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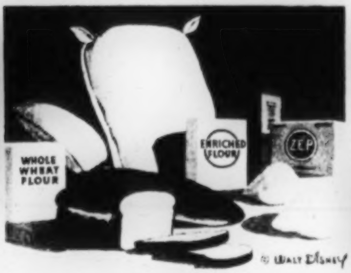
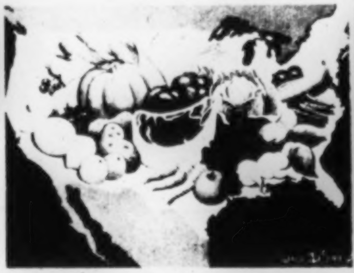
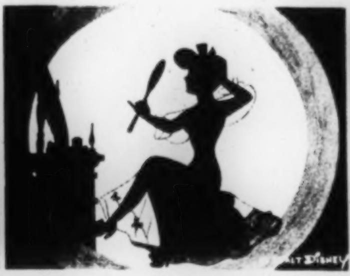


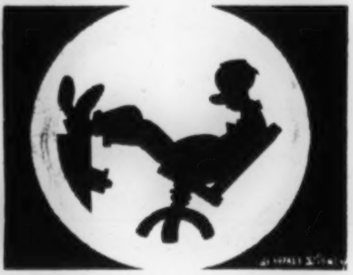
Bread, flour, cereals—if natural whole grain or enriched or restored.



Here's the irony of it. Here we are, in the greatest food producing nation in the world—and yet, out of every *ten* people in this country, *seven* have weak links in their diet —because of "something they *didn't* eat."

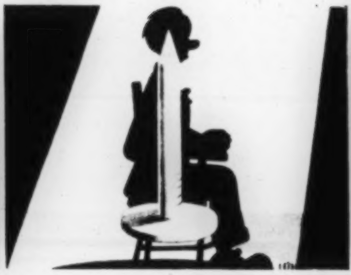


People like the Jones family. Think for a moment—Mrs. Jones. That "schoolgirl complexion," is it coming from the dinner table or the dressing table?

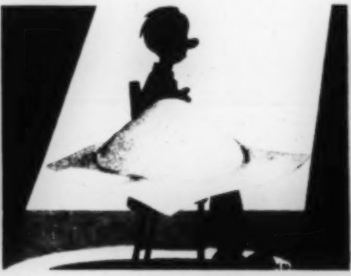


And as for you, Mr. Jones. Your posture—not quite all it should be, is it? And how about that old pep? Been "in conference" a lot lately?

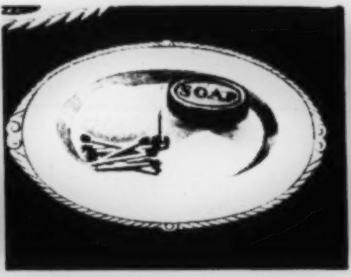
us



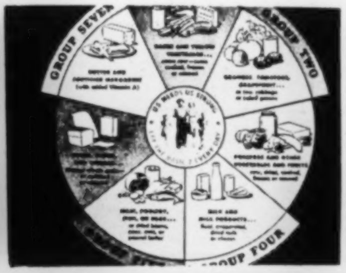
Enough iron to make a small shingle nail.



And smaller quantities of copper, zinc, and other materials.



Now Mrs. Jones can't very well serve a meal of soap, whitewash, matches and shingle nails. No, she must learn to choose the foods that contain the essential substances in these things.



And here's a simple way to provide every essential. From Vitamin A to mineral zinc—the Basic Seven! Designed by leading nutritional authorities, the Basic Seven divides the most important foods into seven basic groups. How does it work?

SOUND MOVIES ON

GOOD FOOD *and* HOW TO GET IT

AVAILABLE IN 16 MM.
FREE FOR YOUR GROUP

☆ **SOMETHING YOU DIDN'T EAT***

The story of nutrition told dramatically in a color cartoon movie by Walt Disney Productions. 16-mm. prints available after September 1, 1945. 9 minutes.

☆ **CANNING THE VICTORY CROP**

The best methods of home canning shown step by step in beautiful color. 22 minutes.

☆ **SAVING THE GARDEN CROP***

How to make the Victory Garden last all year 'round by proper drying, storing, etc. 13 minutes.

☆ **CURING PORK COUNTRY STYLE**

Curing and smoking shown in easy-to-follow steps. Part color. 20 minutes. Take-home leaflet available.

☆ **LIVE AT HOME**

How a farmer can supply nearly all a family's food needs. Color. 11 minutes.

☆ **THE MAN WHO MISSED HIS BREAKFAST***

A little story about a family that learned to eat right. 13 minutes.

TO OBTAIN, SEE OTHER SIDE

TO OBTAIN MOVIES

●

Prints of the movies listed on the other side can be borrowed free in 16-mm. size by any group interested in showing them. Your County Agent may have a print of the one you want. If not, it can be borrowed from your State University film library, your State Agricultural Extension Service, or other film libraries. Some film libraries may make a small handling charge.

Titles on the list followed by an (*) are available also in 35-mm. size through your State Extension Service.

For further information on these films or for the name and address of the nearest film library, see your County Agent or Home Demonstration Agent or write the Motion Picture Service, Office of Information, U. S. Department of Agriculture, Washington 25, D. C. A complete catalog of USDA films will be mailed free upon request.

U. S. Department of Agriculture

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HELEN KELLER

15 West 16th Street, New York 11, N. Y.

September 9, 1944

Dear Miss Pidgeon:

While you are reading this letter, at least two American workers will be stricken with eye injuries.

Every half minute thereafter another workman will lift his hands to his face in agony. During an eight-hour shift, approximately a thousand men and women in our industrial plants throughout the country will undergo temporary or permanent damage to their vision.

Some will have their eyes torn by flying bits of steel or cinders; others' eyes will be burned by acids or molten metal; still others will find their sight growing dim because of the cumulative action of poisonous substances.

Despite the precautions taken, accidents on the home front are yet greater in number than casualties on the battle-fields. As this toll continues, the damaged eyes resulting in immediate or eventual blindness will remain on the increase.

I beg you to consider what it means to be thus robbed of sight. Can you imagine the bitter anguish in no longer seeing loved faces, familiar surroundings, and in losing all the pleasures -- all the beauty of the world? It requires sheer will-power and courage for one so cruelly afflicted to start life all over again.

That is where the American Foundation for the Blind, with which I have labored twenty years, is of vital importance. This national agency for all blind persons stands ready to help those newly plunged into darkness to readjust their lives. This Foundation champions the right of every able-bodied blind man, woman, and child to earn a livelihood and to enjoy the blessings for which God bestowed life upon humanity!

Today there is greater demand on the services of the Foundation than ever. If you give now, whatever the amount, you will give twice; for it will mean helping the blind AND America to win more quickly their battle of independence.

Full of faith in your good-will, I am

Sincerely yours,

Helen Keller.

The Recorder's Court
OF THE CITY OF DETROIT

PSYCHOPATHIC CLINIC
LOWELL S. SELLING, M. D., PH. D.
DIRECTOR

December 6, 1943

Miss Jennie Mohr, Associate Industrial Economist
United States Department of Labor
Women's Bureau
Washington 25, D. C.

Dear Miss Mohr:

I am flattered that you should ask my opinion in the matter of industrial psychology. I shall do my best to answer your questions. I must say that I have no statistical material and that I can only give you impressions. I think that statistical material is impossible to get which would have any validity and sometimes impressions are worth while for the foundations upon which one can direct observation for more accurate conclusions.

1. I feel that the value of a woman counselor would be entirely dependent upon her experience and training in the field of mental hygiene and the plant in which she works. In backward plants, like some of those in Detroit, they would have no value. The kind of people she would see would resent her interference. In other instances, such as the N. A. Woodworth Plant which I consider a shining example, she would be considered of great value and would be in a position to cut down absenteeism. In this plant the counselor is a skilled social worker and for that reason is effective. In other plants so-called counselors are really foremen and do not accomplish anything. I would stress training and inate capacity as well as the cooperation of management to determine the value of a lay person in emotional adjustment.

By the way, have you ever made any contact with Camilla Anderson in Philadelphia? I think she has made very good observations, although I don't know about her industrial experience.

2. As you may know from my paper on absenteeism, a copy of which I am enclosing herewith, my impression is that the primary cause of absenteeism and turnover is mental conflict. I think that people with complexes, conflicts, problems at home, and personal problems are just not able to work unless they have a compensatory need for their earnings which will overcome their resistance toward the job. Even then, I think the conflicts of mental problems make such people who

PSYCHOPATHIC CLINIC
RECORDER'S COURT
DETROIT

12/6/43

who are anxious to work and earn money susceptible to accidents. I have seen a number of individual cases but how prevalent this mechanism is can only be determined by scientific surveys.

3. I know nothing of the effect of jobs on menstruation, or vice versa. My feeling has always been that half of the problems of menstruation were psychogenic and that, if a person were approached from the psychological standpoint and given a thorough study, she would show less reaction to her periods thereafter.

4. The consensus among my people and those that I know in industry is that unless actual menopausal symptoms which disturb working are present or unless there is a menopausal psychosis, the menopause in itself is no problem, and if the work is such that an older person can do it there is no need to consider this factor at all./ The usual effect of the menopause seems to be that the general physical capacity of the worker starts to go down hill and makes careful classification of the incoming worker of advanced years especially necessary. I think the tendency now is not to employ older people because as a rule on jobs other than inspection, or those requiring care rather than speed, their efficiency is not up to that of the younger person.

I should be very interested to get a copy of the pamphlet when it comes out. If you wish supplemental material of the nature of my opinions as given above, do not hesitate to make further inquiry.

Please give my regards to Dr. MacDonald. I hope you people appreciate her for the extremely competent psychiatrist and very pleasant person that she is.

Sincerely yours,

Lowell S Selling

Lowell S. Selling, M. D.
Director.

LSS-ec

April 2, 1947

Miss Eleanor Hosley
Day Nursery Association of Cleveland
2050 East 96th Street,
Cleveland, Ohio

Dear Miss Hosley:

Thank you very much for your letter of March 22. The Women's Bureau is of course very much interested in the relation of women's employment to their family and social life and is currently exploring the possibility of some special studies on this question. We have to date talked only with a few agencies, mostly social service agencies, about the availability of data that could be analysed. The records of your day nurseries for children of working mothers might be particularly helpful in indicating whether and to what extent the mother's employment affects the health and the behavior of children.

Miss Miller, the director of the Women's Bureau, has recently returned to Washington after attending the meetings of the Governing Body of the International Labor Office in Geneva. We hope to review with her in the near future our preliminary plans for considering the relation of the employment of women to family and social life. After talking with her I will write you again in more detail about the questions we have in mind and the possibility of using for analysis the records which you have so generously offered.

Sincerely yours,

Jennie Mohr

JM:[illegible]

Labor Economist

MEMBER OF THE WELFARE FEDERATION
SUPPORTED THROUGH THE COMMUNITY FUND

Ret to J Mohr

1894

THE DAY NURSERY ASSOCIATION OF CLEVELAND
2050 EAST 96TH STREET

March 20,
1947.

Miss Jennie Mohr,
Women's Division,
Department of Labor,
Washington D.C.

My dear Miss Mohr:

Miss Helen Ross suggested that I write you because of your interest in the effect of a woman's working on family life. I expect that one way or another we have a good deal of data around the subject. We have five nurseries and serve the children of working mothers chiefly, although not solely. We are of course very much interested in this sort of thing ourselves and should be glad to be helpful in any such project

Sincerely yours,

Eleanor Hosley

Eleanor Hosley,
Executive Secretary.

mgb

U. S. Department of Labor
Women's Bureau
Washington

February 24, 1947

THE EMPLOYMENT OF WOMEN AS IT AFFECTS FAMILY and SOCIAL PROBLEMS

An examination of the following questions is proposed as a first step in a projected study of the employment of women as it affects their family and social problems. An attempt is here made to discover the extent to which gainful employment presents particular difficulties for the woman with home-making responsibilities, and how these difficulties are handled. Inquiry should also bring out, on the other hand, information on whether and how such work helps to remove or lessen family problems.

There are two types of questions to be asked:

A. Those relating to the community: the extent and conditions of employment of women; customs and attitudes; community services available to working women.

B. Those relating to the individual woman worker and her family.

A. Questions relating to the community:

These can be asked of agencies or people who are concerned with economic and social characteristics of the community, including the question of the amount and character of women's employment. Among such agencies are:

Employment offices
Labor departments
Unions
Employers' associations
Research organizations in economic and social studies,
 if they make studies relevant to this subject
Social agencies, if they concern themselves with
 general economic conditions

Questions to be asked might include:

1. On the employment of women:
   - How many women are employed in the community?
   - In what industries and occupations?
   - At what wage ranges?
   - What are their hours of work?
   - What are the policies of employers or of unions relating to the employment of married women or of women with children, such as provision of maternity leave, re-employment after birth of children?

2. What provisions are there for giving health care to families of working women:

    - —visiting nurses associations
    - health clinics, mental hygiene clinics, dental clinics
    - school health services - medical and dental

3. What are the provisions for caring for children of working mothers:

    - —day nurseries, nursery schools, and kindergartens
    - foster day care
    - foster homes
    - after-school programs, or supervised playgrounds
    - school-lunch programs

4. What provisions exist for aiding the woman worker in her home-making duties:

    - —store hours to meet hours women can shop
    - Services providing regular or emergency home-maker or housekeeper aides

How much are these facilities and services used?

B. Questions relating to the individual and the family:

1. Household management
2. Family living
3. Personal health
4. Child care
5. Social and community living

These can be asked of agencies who are concerned with family and personal problems if they also deal with the related economic factors:

Family welfare and other social agencies, both private and public
Juvenile courts
Domestic relations courts
Mental health clinics and other health clinics
Personal counselling services
School authorities

1. Are there cases in which the working woman finds she cannot handle the mechanics of home management because of the demands of her job:

    - Lack of time and opportunity makes it impossible to shop adequately, to select nutritious as well as economical foods; to find suitable clothing, household equipment, etc.

- Housekeeping tasks undone or left to children or others unwilling or unable to do them

- Inadequate care for personal needs of children or others

2. Family living - What problems of family life arise because of woman's outside work:

    - Forfeiture of marriage or of children because of need to keep job
    - Forfeiture of job because of marriage or child-bearing
    - Lack of normal family social life because of lack of time, fatigue, pressure of home duties, ...
    - Disruption of marital relationship because of the job - either because of its strains, fatigue, etc., or because of attitude of husband, absorption of wife, or other factors
    - Movement of family members away from the home
    - Problems of adjustment to people not in the family coming in because of the woman's need for assistance

3. Personal health - Does it suffer because of demands of the job:

    - Breakdown in health; periods of ill health, or symptoms of illness due to strain, fatigue, overwork, improper food or rest
    - Psychological disturbances arising from lack of leisure or recreation

4. What child-care problems arise because of worker's absence from home or inability to care for children during the time she is home:

    - Lack of supervision during hours out of school
    - Failure to obtain adequate medical or dental care for children
    - Health problems of children arising from irregularity or inadequacy of meals, hours of sleep, rest, recreation, etc.
    - Behavior problems of children because of sense of neglect or burden of too much responsibility .... because of mother's outside work

5. Social and community living:

    - Inability of worker to participate in educational, recreational, or community programs because of pressure of the job

STANDARD FORM NO. 64

Office Memorandum · UNITED STATES GOVERNMENT

TO : Miss Williams DATE: 16 April 1947

FROM : Jennie Mohr

SUBJECT: Records of Juvenile Court and Women's Bureau (Police Dept) for possible use in Family Responsibilities study.

I have examined some records in each of these agencies, to see whether they would be useful for this study. My belief is that the Women's Bureau records would probably not be useful enough to justify taking them off; but that the Juvenile Court records might be. These are my specific comments:

1. For both agencies, the disadvantages of the records lie mainly in the fact that they are only brief, though the J.C. does more follow-up than the W.B. They are mainly concerned with specific charges that bring the children, or the women, into custody. Most cases are either quickly closed or referred to some other agency for care.

2. Only such information on the questions we are interested in is given as may incidentally be recorded. In the J.C. cases, however, there is a good deal more about the family situation, the supervision and home responsibilities of the children, conditions in the home, and the effect of the mother's employment on the children than in the W.B. cases.

3. Although the J.C. cases would not give us at all a full schedule, they would give us what I think may be useful illustrative information. In some instances they discuss specifically the fact that the children got into difficulties because the mothers were away and had made no arrangement for their care.

4. The disposal of cases through referral to other agencies points up the need for community services relating to child care and child guidance. It also sometimes points up the fact that the mothers are not able to deal with the problem or are unaware that there is one.

5. It cannot always be determined (but can sometimes) whether the charges are valid, and therefore we cannot always know whether the children actually are neglected.

6. The cases make very vivid the fact that, regardless of what happens to the children, there is an inescapable necessity for the mothers to work. I think this is a significant point when we think about the relation between the economic and social factors involved in the mothers' employment.

7. Miss Clary of the J.C. picked out a few specific cases that definitely showed the problem of the mother's employment, in order to indicate the kind of material that might be available. I dont know what proportion of all cases these would be.

8. In the W.B. I went through about 105 case records, and found 8 in which the employment of the women seemed a factor in the problem that came to the Bureau. All of them involved neglect of little children, or charges of such neglect.

If you agree that we should not follow up the W.B. records, at least not until some later time, I should suppose I ought to call Capt. Milikan and say something to that effect, rather than leave it up in the air what we are going to do and whether I would be coming back for more. (I woulдnt have to close the door entirely, but should do something about it fairly soon.)

If you agree that we might want to look further into the J.C. records, I'd like to report that fact to Miss Clary also. Would it be appropriate to call her and say that although the records would not fulfill the requirements of a study such as we are proposing (she has had a copy of my statement of questions) we would like to be able to draw on them for illustrative material relating to the care and supervision of children of working mothers; that we have not yet formulated the study, but since we know the character of the records we would like to be able to call her at a later date again.

I do think I should speak to both these agencies, just in order not to leave things up in the air. They will be wondering whether, if or when I would be coming back to see them.

U. S. Department of Labor
Women's Bureau
Washington

February 24, 1947

THE EMPLOYMENT OF WOMEN AT NIGHT - Family and Community Problems

The following questions relate specifically to the effects on family and social problems of the night-work of women with home responsibilities. The subject is part of the wider question of the effects of employment itself.

An examination of these questions relating to night-work is proposed as part of a study of night-work now begun by the Women's Bureau.

The types of questions and the agencies to be consulted are the same for these as for the general questions on employment of women. The questions here raised duplicate, in many instances, those raised concerning the general subject of employment of women. It is particularly desired, however, to discover whether they are of special significance because of the fact that women work during the night, rather than during the day.

A. Questions relating to the community might include;

1. How extensive is night work in the area?
2. In what industries does it occur
3. What is the need for night work (industrial plants on 24-hour schedule; need for restaurants to feed night-workers)?
4. How much night work involves woman workers?
5. Is there a characteristic attitude towards night work for women in the community or in particular parts of the community (nationality groups, unions, e.g.)?
6. What kinds of work do women do at night?
7. Are there special services established to take care of night workers' needs (extra transportation; foster homes; housekeeper services, e.g.)?

B. Questions relating to the individual and the family might include;

I. Types of individual and family problems

   1. Are there cases in which family conflicts occur because the woman worker cannot take part in the family social life on account of her evening or night working hours?

2. Do conflicts occur because she cannot take care of the home-making duties such as:
   (a) meals - irregular or inadequate
   (b) housekeeping tasks undone or left to children or others unwilling or unable to do them
   (c) care for personal needs of children or others is inadequate
   (d) household shopping not done as needed

3. Are there cases of breakdown in health of worker because of lack of proper rest, meals, recreation?

4. Do marital relations suffer because worker cannot maintain normal marriage relations either because of her working hours in relation to those of her husband, or because of ill health or fatigue due to night work?

5. Are there cases of behavior problems of children arising because the woman worker's night-work schedule prevents her from giving supervision and guidance to children?

   (a) hostility of the child toward mother or others in family
   (b) refusal to abide by family regulations - such as meal times, bed times, home tasks, family activities ....
   (c) difficulty in school work because the child
      (i) is insecure
      (ii) needs help with work at home, but doesn't get it
      (iii) is in poor health because he doesn't have proper food, rest, or personal care
   (d) inability of the child to get along with other people

6. Does the mother find she is unable to see to it that her children receive needed medical or dental care?

7. Is the mother unable to see to it that her children have proper social and recreational activities?

8. Does the family suffer from a lack of properly prepared meals because of the woman's work at night?

9. Does the woman worker find that she is unable to take part in community or group activities that she would like to participate in, because of her hours of work - social events; church; union; political; or educational activities?

II. Comparison of women worker's night-work problems and other, such as:

1. What are the kinds of jobs women do at night - are they the same as day-time jobs?

2. Is there any indication that the occupation itself affects the social or personal or family problems the worker faces?

3. Is there indication that these problems are more serious for night workers than for day workers?

4. Is there evidence that night work of the father contributes to these problems?

Miss Williams 27 February 1947

Jennie Mohr

Conference with Children's Bureau on study of employment of women in relation to family problems

Yesterday afternoon I had a conference with three members of the Social Services branch of the Children's Bureau, to discuss this study. I was particularly desirous of consulting them on two matters:

1. Whether the method proposed for getting data was feasible; what agencies would be best to approach, and how it could be done.

2. Whether the specific questions formulated concerning the effects of employment (including specifically the effects of night work) on family and social problems were satisfactory.

I talked to:
  Miss Alice Scott Nutt, head of the Research in Social Services
  Miss Maude Morlock
  Miss Evelyn Smith

1. They were very interested in the proposed study, and believed it would be feasible to get information from social agencies - both general information relating to community services, attitudes, and requirements, and specific information on individual workers from records in case-work agencies. They raised the question, which we had already considered, of how much the records would yield in terms of our specific interests, but believed that they would yield something and it would be worth consulting the agencies for them.

   They also discussed which agencies would be most appropriate, and gave me names of people and agencies in a few localities that they knew had good records and would be cooperative. They also advised me to talk with two in Washington to get information about the nature of their records and also an opinion from people working directly with them - the Family Welfare Association and the Social Work division of the Juvenile Court. They thought it would be desirable particularly to see the National officers of the Family Welfare Association and the Council of Social Agencies in New York, who would know individual agencies.

2. They read and discussed the outline of specific questions I had prepared. They made some few suggestions, but thought that the questions were adequate, and should be discussed further with the agencies themselves who would have information in their records. At her request I left an outline with Miss Nutt.

I believe my next steps should be: 1) see the two Washington agencies suggested; 2) write the two National offices in New York to ask their cooperation and 3) go see them.

Miss Nutt said that Hartford has an excellent Family Welfare Association and would probably be helpful, not only on the night-work but on the general

Miss Williams 24 February 1947

J Mohr

Conference with Children's Bureau Social Service Division

Here is a copy of the revised questions I wish to discuss with C B on ~~Thursday~~ Wednesday next, both general and relating to night-work specifically.

I have made a brief introductory statement about the questions, though I do not want to overburden this sheet of questions with the explanation of the study in detail, which I expect to talk over with them.

These will of course be tentative questions raised, in order to find out whether they are the right ones to ask, what others should be included, and whether it appears likely that information can be obtained from specific records of cases coming to the attention of individual agencies.

I expect also to bring up the questions relating to night-work specifically, but think it best in talking with CB to present the general case before the particular night-work one.

Miss Miller April 2, 1947

Constance Williams and Jennie Mohr

Study of relation of employment of women to family responsibilities

1. Background of interest:

The question of the employment of women with family responsibilities has been brought to our attention by a number of requests for information and recommendations, in addition to the Bureau's long-standing interest in the subject. For example, the International Federation of University Women, through the A.A.U.W., asked for material on this subject in connection with their proposed international study. Material was also requested for use in a French "Congres Mondial de la Famille et de la Population" to be held this June in Paris. Plans for our own study of night work in the restaurant and hotel industries include an examination of the effects of night work on family and social life.

An examination of available sources indicates that for this country there is almost no information on this subject. A few highly restricted studies have been made, mainly theoretical in nature and generally concerned with professional rather than wage-earning women. We have therefore undertaken to look into the question to see if we can obtain practical data on specific facts concerning the relation between the employment of women and their family responsibilities.

2. Scope of project:

For a beginning, it is proposed to gather information from a few selected areas. The cities used in the night work study would be the first to be explored. It is our purpose to consider the question of family responsibility particularly in relation to the employment of women on evening and night shifts in the places where the night work study is carried on.

The study of family responsibilities, however, should not be confined to the areas of the night-work study, nor to the question of night employment. This aspect of the problem should be considered as a part of the broader general problem of employment of women as it affects their family living, and an examination of family responsibilities should be developed to meet this general question.

We proposed to explore as a source of information the records of various types of social agencies who deal with family problems, who have adequate records that indicate the instances in which the woman worker's employment affects those problems. Such agencies are thought to be a good source since they reach a fairly wide group of families, their records, if they are good, are factual, precise, and objective, and furnish not only the information obtained from individual women but also the facts which the trained observer will find.

At first it was thought necessary to create interest in this exploration, and interviews were sought with individuals in various agencies, as detailed below. The response, however, was energetic and immediate, and we found that there was considerable interest in the possibility that records of the agencies might be used for such a purpose.

3. Content of inquiry.

The questions proposed for exploration in individual cases involving working women, copy of which is attached to this memorandum, deal with the following six subjects:

1. General background information about the woman worker and her family
2. Household management
3. Family living
4. Personal health
5. Child care
6. Social and community living.

We would expect to get information on cases in which employment has been a constructive factor, as well as those in which it is a disturbing one.

In addition to information, taken from individual case records, it is proposed to make a broader social inquiry, such as will be made for the night work study, into the general community problems related to these questions.

4. Background work to date.

A preliminary outline of the questions on the topics listed in Section 3 above was prepared for discussion with government and social agencies we thought would be interested.

a. Children's Bureau

A conference was held with three members of the Children's Bureau staff, to discuss whether they were working in the field and to get advice on this problem. The persons consulted were:

Miss Agnes Scott Nutt, head of the Social Service Research Division
Miss Maude Morlock, Day-care program for children
Miss Evelyn Smith

They were very interested and thought the project well worth developing. They discussed the preliminary outline of questions and advised us on agencies to consult. They had no basic criticism of the method proposed, but made constructive suggestions about details. They agreed that it would be desirable to enquire from some agencies here in Washington what their attitude would be on such a study and if records of agencies of their types would yield the desired information. They said they would be glad to help further at any time.

b. Washington agencies

With the advice of the Children's Bureau the following people were interviewed:

Mrs. Mildred Kalinski, Director of Family Service Association
Miss Virginia Clary, Social Work Division, D.C. Juvenile Court
Captain Wilkin, Women's Bureau, Police Dept. (This agency also at the suggestion of Miss Clary)
Miss Koehler, Chief of Protective Service, D. C. Board of Public Welfare

They were all very interested in the possibility of developing such a project, and the Family Service Association was enthusiastic. The Board of Public Welfare pointed out, however, that they did not have trained social case workers on their staff and did not keep full records, so that they would not be able to furnish us with data. They thought that other agencies might, however.

Both Miss Clary of the Juvenile Court and Captain Wilkin of the Women's Bureau took time to examine their records in the light of our questions, and both called back to say that they thought the records might be pertinent and we would be welcome to come and use them whenever we wanted to.

5. Present activities.

Although it was intended to consult the Family Service Association only to find out what they thought of such a study and whether the proposed questions were valid and adequate, Mrs. Kalinski and her Chief Supervisor, Miss Dorothy Thomas, were immediately interested in whether they could try it out. After a conference on the purpose, method, and scope of the study, they proposed to consult their staff members to see if it would be possible for them to try-out our proposed methods of study by taking off information from a selected group of case records. The staff members agreed to this. They were also particularly interested to see what their records would show. Mrs. Kalinski said that many social agencies are aware that a great deal of valuable research material is in their files, but they have no one to do anything with it and they welcomed this opportunity to have it put to use.

A committee of five staff members of the Family Service was appointed to work out, with me, a schedule-outline that could be used by case workers going over their records. They propose to examine all current cases during the month of April, and plan to allow their case-workers sufficient time to do the work of filling the outline for each case in which a woman's employment is a factor in her family problems — whether favorable or unfavorable.

Two meetings have been held with Family Service staff to work on the outline, and another meeting is planned. The outline is primarily the responsibility of that agency, though they are anxious to make it suitable for our purposes. When it is finished they will have it mimeographed and use it during the coming month. At the end of the month they will turn the filled-in outlines over to us.

This appears to be a very desirable opportunity (although it had not been expected) to try out the method, and to see exactly how much and what kind of information such records will give. On the basis of this experience we will be much better able to plan further work.

Miss Margaret Martin agreed that it would not be necessary to take up this exploratory step with the Bureau of the Budget.

6. Next steps.

It seems desirable to spend some time examining the records of the Juvenile Court and the D. C. Women's Bureau, as we have been invited to do, to see whether these agencies, very different from the Family Service, would yield usable records. It is important, we believe, to get information from as many different types of agencies as possible to cover as wide a variety of people and problems as we can.

Other agencies which we would like to explore would include:

1) Day care centers and other agencies for child care. As a result of a personal letter to a friend working in the Chicago Institute for Psychoanalysis, mentioning our interest in this field (the friend is particularly concerned with work with children), we received a letter from the Executive Secretary of the Day Nursery Association in Cleveland, who had heard of our interest and offered to cooperate on any study we would be making. Draft of reply is attached for your consideration.

2) National offices of the Family Welfare Association, the Council of Social Agencies, and perhaps the Child Welfare League of America. They could inform us about specific agencies that might be willing to cooperate with us and would have usable records. It would be important to select agencies and areas on the basis of as much information as we can get about the kinds of records they have and the interest they would show in the study.

WOMEN'S BUREAU
FEB 8 - 1946
DEPARTMENT OF LABOR

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
WASHINGTON

1215 Widener Bldg
Phila 7, Pa.
Feb 6, 1947

Dear Jennie,

Today I heard from Sara Fredgant at the Amalgamated about their "show place". They think that Daroff at 23rd & Walnut (H. Daroff & Sons) would probably be the best. Sara was out ill - hence the delay in hearing from the Amalgamated.

Miss Dye is here - arrived last night —

and we began our visits this afternoon to plants. We are to go to Bayuk Cigar tomorrow - so I can see what it is like & sound them out on pictures.

Hastily yours,

Becky

Wilton 2, Conn.,
January 24, 1946

Dear Miss Mohr:

I have to be in Washington during the first part of next week and hope I can catch you in your office to talk some more about that article on the Women's Bureau for *Parade*. My plans are still a little tentative but I hope to be there on Monday morning and will telephone your office for an appointment.

Sincerely

Clyde Beals

Clyde Beals

Miss Jennie Mohr
Women's Bureau
Department of Labor
14th & Constitution Avenue, N. W.,
Washington 25, D. C.

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
WASHINGTON

JAN 31 1946

1215 Widener Building
Philadelphia 7, Pa.

January 29, 1946

Miss Jennie Mohr
Women's Bureau
U.S. Department of Labor
Washington, D. C.

Dear Jennie:

In reply to your letter of January 25th concerning photogenic plants, especially the Bayuk Cigar Company, Philco and /or Stetson hat I have the following to report and suggest:

(1) Bayuk Cigar Co.,I am told by the Wage-Hour inspector who has been there most recently is a very photogenic place, and also is a co-operative type of firm. It is a completely air-conditioned plant, has a good lunchroom, and presumably good rest room facilities. I noticed from a newspaper clipping of a couple of years ago that at that time this firm had the best safety record for the city, and that M. L. Wurman was the plant manager. The plant is located at 9th and Columbia Ave. They also have a plant at Lancaster but of this plant I have no information. If you wish me to go to the plant and see if I can make definite arrangements for picture I shall be glad to do so. They do have cigar-making machines, about 4 girls to a machine, I think.

(2) Neither Philco or Stetson Hat would be very suitable for pictures showing use of conveyors or other weight-lifting or similar strength-saving devices I believe. The work in both places is relatively light. Instead of these plants I would suggest trying the Crown Can Company, H and Erie Ave. This plant has always used women and has conveyors and various kinds of mechanization. Also it is a new, modern plant. In January 1943 I heard Mr.Herman C. Heiser who was in charge of Industrial Relations at Crown Can tell of their use of women, pre-war as well as war. Here,too, I would be glad to make the contact if you want.

(3) To suggest a suitable garment factory is a bit difficult as these factories are usually located in two or three floors of a loft building that ten to one is not much to look at. I have called the Amalgamated to find out what plant they would consider their "showplace" and they are to call me back. I have the names of three -- Daroff, 23rd and Walnut Sts., Makransky, 22nd and Market Sts., Goldsmith, 642 N. Broad St. -- but I will have to let you know what the A.C.W. says. These are men's clothing firms. Rosenau Brothers, 25th and Westmoreland Sts, and Jacobs, Grossman, and Rosenberg, K and Erie Sts are two firms making children's dresses which formerly had homeworkers, especially the latter. I do not know of any jewelry factory in Phila which had homeworkers --- guess they are all in Rhode Island.

I want to thank you for your letter of the 22nd with the suggestions for whom to contact for Miss Dju. About the same time I got your letter I saw an article in the Record about a special division of industrial hygiene in the Pennsylvania Department of Health, headed by a Dr. Joseph Shilken. Dr. C.F. Long is the name of the medical director at the Bayuk Cigar Co. He was also chairman of the Commission on Industrial Health and Hygiene of the Medical Society of the State of Penna.

Sincerely yours,

Becky (Apologies for the typing!)

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
WASHINGTON 25

WOMEN'S BUREAU
JAN 15 1946
DEPARTMENT OF LABOR

Summit, N. J.
Jan. 12/45

Dear Jennie,

I was on leave for three weeks and got back to the office Monday to face the accumulation. At least twenty things had to be done at once & without help. What to give priority! I fancy I slipped on your request because I had nothing to offer.

I can't guarantee there is no plant in New Jersey ~~that~~ in which pictures could be taken to illustrate the "before and after" situation you described in your letter. I might find some if I could find time to look — but that's impossible. You see the expansion in use of women in the State during the war was largely in the number added to already woman-employing industries such as electrical, clothing, textiles rubber etc. No radical changes were made in set-up or conditions of work that would ~~for~~ lend themselves to photography. In any case this would have shown up better if the pictures had been taken before & during the war.

You seldom ask me for anything and I'm sorry not to oblige and ask forgiveness again for the tardy answer.

Sincerely, Helen

P.S. I worked here at home until 11:30 Thursday night and have been going over Laundry, Cleaning & Dyeing Wage Board testimony with Miss Dyckman all of this Saturday afternoon

H.B.S.

Belden Hill Road
Wilton 2, Conn.,
December 29, 1945

Dear Miss Mohr:

Many thanks for your letter suggesting possible subjects for the pictures. I think all five subjects you list would offer good picture possibilities, and the favorable situation for women created by the introduction of labor-saving devices offers an interesting angle.

The next big problem is to work out picture situations which will bring out the things the Women's Bureau representative does with these gadgets and ideas. Presumably her job is to persuade managements (foremen and employes, too?) that such gadgets and ideas will help production, or produce good morale, or whatever they do; also, I imagine, to interest industrial designers in developing or improving gadgets that will solve some problem which the Bureau has observed.

So we want to show situations of consultation and persuasion involving the odd-looking gadgets. As you know, such human touches give life to what would otherwise be rather dull subjects, and thus greatly increase the reader interest. Thus we could show a manager opposed to what he considers "frills," and having to be convinced; or maybe a board of directors (for which we could supply models) hearing a lecture with charts--in other words, the most interesting and striking situations in which the representative finds herself.

The pamphlet, "When You Hire Women," interested me particularly because it seemed to suggest many of these lively situations. But maybe we could get as good ones by presenting the imaginary case where the representative would be persuading the management to outfit its plant with what the Bureau would now consider completely modern equipment. In short, we would show what the Bureau would consider an ideal factory for women--that is, the equipment that would make an ideal factory. Our pictures might show the representative trying to convince the management on the more novel gadgets and ideas, and maybe working with a designer on some of them; then the accompanying text (which will be brief) could carry a list of the outstanding items which the Bureau recommends. The story of course could present the case as an imaginary one designed to illustrate the Bureau's role in improving working conditions for women.

If we can work out something like this, it seems to me that the next step in our project is for you to give me a list of a few likely situations and let me work up a tentative shooting script. Then we could go over this together on your next trip to New York.

As for the factory arrangements, I am sure Parade can take care of them if you will give us some likely places.

Best wishes for a Happy New Year.

Sincerely

Clyde Beals

Clyde Beals

Miss Jennie Mohr,
Department of Labor
Women's Bureau
Washington 25, D. C.

& suppose he has asked for your help without realizing how much we expect
you [illegible]

Belden Hill
Wilton 2, Conn.,
December 17, 1945

Dear Miss Mohr:

I have just been examining the interesting material you gave me and the pamphlet, "When You Hire Women," made me wonder whether the best way to handle the story might not be to present it as a sort of case history of a plant introducing women for the first time into its production departments. Such an approach would present some problems from Parade's point of view because the idea might seem old. You will know better than I do whether there are many companies left that do not employ women in production jobs. If there are, the story would be all right. In any event, we could present it as an imaginary case showing all the ideas the Women's Bureau would advise incorporating if it were called in as consultant. Everybody would be interested in knwoing what the Women's Bureau now advises.

You may have some better ideas, of course. But I'll be interested in hearing how this one strikes you.

It was a great pleasure to hear about your work the other day.

Cordially,

Clyde Beals

Clyde Beals

Miss Jennie Mohr
Women's Bureau
Department of Labor
14th & Constitution Ave, N. W.,
Washington 25, D. C.

Memorandum to Miss Miller
From Jennie Mohr

Subject: Interview with Mr Clyde Beals on picture-story of Women's Bureau work for Parade.

Mr Beals had a rather definite idea, but an erroneous one, of what sort of picture-story he might prepare concerning the work of the Bureau in relation to the welfare of women workers. He had the idea that we did straight factory-inspection work. He wanted a picture showing a Bureau "inspector" first investigating some bad plant condition (an accident, dangerous work-place, etc.); then a picture showing the "inspector" instructing the employer how to improve the condition; then a picture showing the same place with the hazard removed.

I explained that we were not factory inspectors; that we worked on an advisory and consultant basis. I told him about the work of the Bureau in developing standards for women's employment, discussed the health and safety standards in particular, and the long-term improvement of conditions for women workers over a period of time. Mr Beals did not want to deal with any long-range ideas, he said they would not make dramatic pictures; nor with historical changes; nor with any general basic standards.

I said I thought it would be possible to use specific instances to illustrate the type of work the Bureau did, but that the kind of thing he had in mind was more the work of a State factory inspector. He was agreeable to changing his ideas, provided we could suggest specific pictures that would be of dramatic interest. I said I would talk it over again with Miss Robinson and Miss Miller and write to him.

Later I had the enclosed letter from him. I doubt if this suggestion is useful, because of the conditions arising from the cessation of the war.

Mr Beals would like about eight or ten pictures illustrating perhaps three different kinds of problems we deal with. When I told him about how Dr Greenburg of the N Y Dept of Labor acted as consultent to me, he was interested in getting a picture showing Dr Greenburg discussing some question with me--preferrably one showing some of Dr Greenburg's laboratory equipment.

I believe we might suggest to Mr Beals pictures covering seating, rest rooms and lunch rooms, perhaps good work clothing (showing women at work that requires protective gloves, aprons, etc.; he does not want pictures of welders).

With proper captions (which we could see to), these pictures might be made to illustrate some ways in which standards are put into practice. Mr. Beals puts especial emphasis on a before-and-after picture--showing first women working without good conditions, then a Women's Bureau representative consulting with the employer, then the same picture with the conditions improved. I do not know how feasible this is.

Mr Beals would assume responsibility for making plant contacts for pictures; but he would like suggestions of plants to go to.
I discussed with him the possibility of showing the improvement of conditions in such places as the china factory in Syracuse which was the focus

for much research on silicosis, or the garment shops in New York; but he was rather definite about wanting to center the story on specific things that the Women's Bureau itself has worked on.

If you believe it is desirable to plan such specific pictures as a series showing improper and proper seating; good rest and lunch rooms; and proper clothing, Mr Beals would like a suggested lay-out for them, to indicate what would go into the pictures.

If you think the suggestion in his letter, of pictures showing the introduction of women into new production jobs, is a good one, we would have to suggest specific examples of jobs, and how the pictures might show the introduction of the women to them.

In either case, Mr Beals would like names of specific plants that might be willing to have such pictures taken, and would be able to illustrate the points.

Particularly interested in
rubber plant (protective clothing)
freezing plant (interesting industry, assembly-line)

December 10, 1945

The Women's Bureau will be very glad to cooperate with you in your plans for a spread of pictures to illustrate the Bureau's activities in maintaining the safety and health standards for women workers, and to be built around the work of the staff specialist in this field, namely Miss Jennie Mohr. As she is planning a personal trip to New York for the coming week end she would be glad to confer with you on Friday, December 14th, at any time or place you wish to designate in New York City. At that time she could discuss the work of the Bureau, suggest factories or other work places in the New York Metropolitan area and beyond, where appropriate pictures could be taken. Also she could be available for the taking of pictures all day on Tuesday, December 18th, and on Wednesday the 19th until about 1 P.M.

Miss Frieda Miller, the director of the Women's Bureau will be in New York City between Christmas and New Year's, and Miss Mohr could also be there for December 27th and 28th, should you find it of interest to take any shots then, including possibly one of Miss Mohr consulting Miss Miller about the survey. Miss Miller has a very comprehensive knowledge of industrial conditions in New York as she was the labor commissioner there for several years and prior to that the director of the women's division in the New York State Department of Labor.

If you do not necessarily plan to complete this project before January 1st, Miss Mohr could give more time to it just after the first of the year as she expects to be conducting a survey in New York and could adapt her time to yours for the taking of pictures.

The Women's Bureau does have a regional representative in New York City, Mrs. Helen Sater, whose office is: Room 919 Parcel Post Building, 341 - 9th Ave. (Tel. LAckawanna 4-9400, ext. 479). However, she will be away from her office for practically all the time until after January 1st.

Note! Mrs. Pickel will include something like this in replying to Mr. Beals.

Monday
6/30/47

SUMMARY NOTES ON JENNIE MOHR FILES

1. File drawers , A - Z:

See card catalogue of folders; material is filed by subject-matter. These folders contain the material for answering inquiries on special subjects, etc. Also contain work related to special studies (Night Work, Injuries to Women, Maternity Benefits, etc.)

2. Card Catalogues:

1) On window: a) Bibliography by subject-matter, on safety and health

b) List of organizations, agencies, and people with whom contacts have been made in the health and safety field.

2) On desk: Self-explanatory file of firms, unions, and organizations relating to health-insurance and medical-care programs; maternity-leave policy; vacation and sickness provisions. Also notes on "Family responsibility study" and, in the back, records of maternity study cases.

Also contains section on State reports on Industrial Injuries, indicating which States publish such reports periodically, where they are published, latest date of publication, and whether or not they include data by sex.

3. Bottom file drawer:

1) Copies of Women's Bureau publications
2) Miscellaneous publications of Children's Bureau, Div. of Labor Standards, and BLS, and some other miscellaneous publications filed according to agency and subject.
3) Series of Wisconsin Statistical Releases, received periodically, covering industrial injuries (Wisconsin Industrial Commission)
4) Newly begun series of California releases of statistics on injuries (Calif. Labor Dept.)

4. In back part of Editorial Room:

1) Two book-case shelves, labelled, contain miscellaneous State and Fed. government publications on safety and health, including reports of Navy Safety Dept., U. S. Compensation Commission, US Public Health Service, and some State Departments of Labor.

2) One file drawer, containing mainly old material inherited from Mrs. Mettert which I never did anything with. Labelled "Mohr".

5. On window in 1332: File of Public Health Reports, received weekly.

6/30/47

Summary notes on JM files.

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U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

WOMEN'S WARTIME OCCUPATIONAL HAZARDS

I - Industrial Accidents Among Women

1. The wartime trend in women's accidents
    (1) Statistical evidence of increases
    (2) Need for more complete statistical information.

2. Special accident hazards to women
    (1) Women as inexperienced workers. /The extent to which women in war industries are new workers or have transferred to new occupations requires consideration./
    (2) Work clothing problems
        (a) What constitutes (1) safe headwear, (2) safe uniforms, (3) good work shoes
        (b) Other special clothing problems
        (c) The presentation and enforcement of clothing rules
    (3) Adaptation of machines, benches, seating arrangements to women replacing men
    (4) Handling materials
        (a) Maximum weights for lifting and carrying
        (b) Engineering the heavy work-out of the job
        (c) Training the new worker in lifting and handling

3. Special problems of certain industries employing large numbers of women
    (1) Farming
    (2) Shipyards
    (3) Railroads

II - Industrial Health Problems of Women

1. Increased exposure to harmful substances such as lead, benzol, and other solvents, mercury, radium, and carbon monoxide, TNT, lead azide, dermatitis producers such as tetryl, fulminate of mercury, cutting oils and compounds.

2. Special war problems of control
    (1) Examples: (a) increase of lead in solder, (b) subcontracting radium painting, (c) addition of chlorine compounds to cutting oils, (d) others.
    (2) Present validity of maximum allowable concentrations established under peacetime conditions.
        (a) Effect of increased hours, short lunch period, pressure for production, overcrowding, use of makeshift washing facilities, too little time or inadequate equipment for washing, fatigue factors such as poor seating, monotonous work, etc.

3. Increased exposure to harmful conditions
    - (1) Temperature extremes
    - (2) Eyestrain (use of magnifying glass for fine work)
    - (3) Continued standing

4. Special problems of certain war occupations
    - (1) X-ray operation
    - (2) Radium dial painting
    - (3) Welding
    - (4) Grinding occupations
    - (5) Operation of pneumatic tools
    - (6) Other occupations

5. Special problems of certain workers
    - (1) Standards for the employment of pregnant women
    - (2) Standards for the employment of young girls - 16 to 18
    - (3) Standards for the employment of handicapped women

6. Health maintenance programs
    - (1) Preemployment physical examination
    - (2) Nutrition programs
        - (a) Provision of nutritious lunch
        - (b) Educational activities
    - (3) Cold prevention programs
    - (4) Methods of preventing monotony
        - (a) Music in factories
        - (b) Rest periods

To await results of BLS exploratory survey for available data. -

May 45

Statement of a Proposed Study of the Health of Women in Industry

1. Purpose of the study is to get basic information about the health of working women, to the end that we can discuss the character and the extent of their illness. Such information is necessary before recommendations can be made to improve their health.

The proposed study is purely fact finding in character. It is directed toward getting data on the extent of absence from work due to illness, and on certain factors that might be related to sickness absence. Absence from work because of illness is an objective, though incomplete, measure of the health of workers. Although it does not indicate the extent to which ill health occurs without loss of time, it gives a sound minimum value of the extent to which illness interferes with work. An analysis of sickness absence can show what are some of the health problems of industrial women workers and also how extensive these problems are.

2. Type of information needed. An inquiry will be addressed to officers in plants to find out whether they would be willing to cooperate in the study by making their records available, and whether their records are suitable. (Selection of plants to which this inquiry will be directed and, from these, plants in which to make the study, will be discussed later.) The study is an analysis of plant records of sickness absence among women workers in industry. It is planned to cover a six-month period, July 1st to December 31, 1944. It requires that the recorded absence be certified as due to illness, either through a doctor's certificate or through records of the medical or personnel department of the plant. For this reason it is confined to absences of two days or more, since shorter periods usually do not require certification.

All illnesses should be recorded, whether or not of occupational origin. (The inclusion of absence due to pregnancy when known will be discussed later.)

For purposes of analysis, individual records should be obtained on the frequency and duration of sickness absences among women, types of illness, and the age, marital status, occupation, and length of service reported. The number of records to be used from each plant will, of course, depend primarily on the number available. If not all the records of women working during the period studied are to be used, random selection should be made.

3. Specific questions about absence records. The following questions will be asked of the plants selected, to find out whether the data needed for the study are available. A letter explaining the purpose of the study will accompany the questions:

(1) How many women have been employed for the six-month period from July 1st to December 31, 1944?

(2) Do you require a certificate from either a private or a plant physician for return to work after absence due to sickness?

(3) If such certificate is required, how many days may the worker be out because of illness without certification?

(4) Do your records of sickness absence among women workers indicate the following for each absence:

a. Name or number of woman absent (to identify individual record)
b. Number of days absent and dates.
c. Type of illness (including accidents)
d. Occupation of woman, or department in which she works
e. Age
f. Marital status
g. Length of employment in the plant
h. Total length of employment

4. Use of data

The data will provide material for an analysis of the seriousness of sickness absence in terms of frequency, amount of time lost, major causes, and relation to such factors as age, marital status, and occupation. To this end the following procedure should be followed:

(1) Gathering the data

(a) A general letter of inquiry will be addressed to a number of plants (see No. 2, above). Its purpose will be to ask if the plant would co-operate in the study by making available its records; and if the records are suitable for the study. A copy of the proposed letter is given herewith.

(b) Selection of plants to whom letters will be sent: Since some certification of sickness as cause of absence is required, a first assumption can be made that plants with health benefit plans will be more likely to have such certification than those without. Therefore plants will be selected from among those having such plans, so far as possible. Basis for selection will include:

—existence of health benefit plan
—employment of large number of women, over a specified period of time
—industries to be specified
—geographical location to be specified

(c) From the replies to the original letter of inquiry, plants will be selected for visiting. Forms will be used for taking off the relevant facts on each woman included in the study. See copy of proposed form herewith.

—Identification of the women who were employed during the six-month period of the study can be best made by getting those on the payroll as of July 1 and as of December 31. The names common to the two lists can be taken.

—Question: should women be listed who have left work because of ill health during this period?

--Pregnancies, when a known cause of absenteeism, should be recorded, but not used in the compilation. They should be used separately.

--Injuries should be included, as well as illnesses. Occupational and non-occupational.

(2) Compiling the data

The basic factors in analysis of sickness absence can be obtained from the following tables to be compiled from the individual records:

(a) Frequency of sickness absence:

--Average number of absences per 1,000 workers, by type of and marital status.

(Evidence of marked differences between married and single women, shown in a current British study, makes it worth while to include the marital status in our data)

(b) Disability:

--Number of days lost per 1,000 workers for six-month period (and average number of days lost per worker) by type of illness; for all women, and for married and single women separately; by age groups.

--Number of days lost per 1,000 workers for six-month period (and average number of days lost per worker) by occupational group. (Classification of occupation will depend on range of industries and of occupations included in the data.)

(c) Severity:

--Average length of disability by type of illness, for age group and marital status. It may also be desirable to get severity rate according to occupation.

--Frequency distribution of lengths of absences, according to age and marital status, may give more detailed information on longer- and shorter-termed absences than is given merely by the average length of disability.

(d) Distribution:

--Percent of women having 0, 1, 2, 3, and more than 3, absences during the six-month period, by marital status and age.

(e) Length of employment:

--Relation of number of absences, and number of days lost, to length of employment in plant and to total employment if these two items can be obtained.

(3) Analysis and recommendations

The tabulations will show the extent of sickness among women workers, as measured by its cost in time lost from work. They also will show whether the problem varies with marital status, age, or occupation. They will point out the outstanding causes of sickness absence, which can be compared with similar data covering more general groups and covering only the longer-term illness.

Attention can be directed to special needs which may be indicated by the results of the study. Question of the effect of occupation on illness may be raised, and show the need for further study of working conditions and placement problems related to specific jobs. If differences between the groups of married and of single women are marked, they may lead to factors inherent in marital status that affect sickness rates. Differences between various age groups may also emphasize the age factor in job placement, or the need for particular attention to the prevention of certain types of illness in one or another age group.

An indication of a relation between sickness and length of employment may mean that the work does have an effect on health. It would at any rate call for close examination of factors in the work situation which might have such an effect.

The Women's Bureau is undertaking a study of sickness absence among industrial women workers as a first step in obtaining precise information about their health problems. Sickness absence is of particular significance to both the employer, for whom it means loss of manpower, and the workers, for whom it means loss of earning power. Any program to remove the causes of sickness absence must be built on a knowledge of facts concerning it.

It is the intention of this study to obtain the facts through an examination of sickness absence records of plants employing a large number of women. The period to be covered is the last six months of 1944. Where records are available, we should like to take off the necessary items for compiling. The work will be undertaken by Miss Jennie Mohr, of our Research Division.

Would you be interested in participating in this study by allowing us to examine your absence records and use them statistically? [illegible] include your plant? All sources, of course, will remain anonymous. In order to find out whether suitable records are available, we are asking employers who are interested in obtaining this information to answer the four questions on the enclosed sheet. We should appreciate your assistance in this project.

Yours sincerely,

Frieda S. Miller, Director

1. How many women were employed by your organization for the six-month period from July 1 to December 31, 1944?

2. Do you require a certificate from either a private or a plant physician for return to work after absence due to sickness?

3. If such certificate is required, how many days may a worker be out because of sickness without certification?

4. Do your records of sickness absence among women workers indicate the following for each absence:

   (1) Name or number of woman absent (to identify individual records)
   (2) Number of days absent and dates
   (3) Type of illness (including accidents)
   (4) Occupation of woman, or department in which she works
   (5) Age of woman
   (6) Marital status of woman
   (7) Length of employment in the plant
   (8) Total length of employment

STANDARDS FOR WOMEN IN MANUFACTURING
1942

Standards for women in Mfg.

General file

Practically all UB material

Prepared for use in the steel industry when the hiring of women becomes a "must."

By X. North, Supervisor of safety
National Tube Co.
Lorain Works
Lorain Ohio

See his letter Aug 28, 1942.

X. NORTH -

WOMEN IN INDUSTRY

1942 -

THE FOLLOWING AUTHORITATIVE INFORMATION HAS BEEN OBTAINED FROM VARIOUS SOURCES, INCLUDING RESULTS OF THE LATEST GOVERNMENT RESEARCH AND TABULATIONS, AND SUCH STATE CODES AS HAVE A BEARING ON THE QUESTION .

From the U.S.Dept. Labor - Women's Bureau -

Typical operations on which women can be employed more extensively in war production.

Code A - Women now used extensively. Numbers could be increased with short periods of training on the job.

B - Women now used to some extent. Numbers could be increased after short training periods and upgrading from other jobs.

C - Women now only used to a slight extent. Could be employed readily after pre-employment and supplementary training such as that now offered men.

OCCUPATION

Note - (Notations on skill as given below are not applicable in the same way in all plants)

1. Manipulative Skills.

Operating machines such as -

Drill presses - single and multiple drills (semi-skilled, usually repetitive)
Milling machines - light and micro machines (semi-skilled and " " "
Light punch and forming presses (semi-skilled, usually repetitive.
Bench and Watchmaker's lathes (skilled and semi-skilled, no usually " "
Burring, Polishing, Lapping, Buffing, etc. on lathes. (semi-skilled)
Light-duty Hand and Automatic screw-machines (semi-skilled, usually repetitive)
Light Turret-lathes (semi-skilled)

Women can set-up their own machines if instructed adequately.

Assembly - All types of light sub and final assembly requiring the use of hand tools, such as, pliers, mallets, screwdrivers, files, electric drills, bench assembly machines and riveting-presses (semi-skilled, may or may not be repetitive.)

Sheet metal forming and riveting (semi-skilled and sometimes repetitive)

Hand finishing machined parts by filing, burring, and lapping (semi-skilled, repetitive)

Welding.

Acetylene and torch (skilled)
Electric arc (skilled)
Spot (semi-skilled)

Soldering (semi-skilled or unskilled)

Electrical work - wiring and assembling parts, winding coils and armatures, soldering, taping, etc. (semi-skilled, though may be skilled)

Painting .

Spray painting small parts and products (semi-skilled and unskilled, repetitive)
Touch-up and hand finishing (semi-skilled and unskilled, repetitive)
Stenciling (unskilled, repetitive)
Radium (semi-skilled, repetitive)
Masking before painting (unskilled, repetitive)
Racking and unracking (unskilled, repetitive)

11. INSPECTION.

Visual (semi-skilled)
Guage, micrometer, caliper, blueprint, etc. (semi-skilled)
Calibrating (semi-skilled and skilled)
Checking and Testing raw materials, stock and salvage parts (skilled)

111.PACKING.

Labeling,etc. (unskilled)

IV. FACTORY SERVICE.

Production planning, routing and control (skilled)
Tracing (semi-skilled)
Drafting (skilled)
Tool-crib, Stores tending and dispatching (semi-skilled)
Timekeeping and FactoryOffice (semi-skilled)
Factory clerks (semi-skilled)

V. SUPERVISING. (skilled)

VI. TRAINING. (skilled)

VII.PERSONNEL RELATIONS.

Interviewing and hiring women (professional)
Nursing (professional)
Welfare (professional)

VIII. GENERAL OFFICE CLERICAL (skilled and semi-skilled)

STATEMENTS BY THE DIRECTOR OF THE WOMEN'S BUREAU DEPARTMENT LABOR .

The time has passed when an employer could depend solely on men to fill his work benches and his drafting tables; no more can he believe that the labor supply of men is plentiful or that he can hire it away from some competitor, at a higher wage. And of course the time is long past when jobs in factories can be described as requiring, ' a strong back and a weak mind '. There was a news item the other day in which someone said that the delicate essentials of airplnne construction can be dome very well by women, at the sacrifice of only her long fingernails.

There has been an overnight shift in women's position; the sudden entrance of the country into war has moved them from the second line of defense workers into the front line. It probably will be necessary to use them to the fullest extent, according to General Hershey and Colonel Battley (who is chief of the labor section of the war department).

Women are not yet employed as extensively as war-workers as they are in factory work in peacetime. By war-workers I mean those employes who have been added to the labor force of the country, in whatsoever capacity, because of the war production program. That this is changing rapidly is shown by the information we have collected on our visits to plants made since December 7th. The Women's Bureau made some surveys last year of defense industries, and now we are checking on the progress made in the employment of woemen since that time. For example, the following story of how one company took care to place women most efficiently is of great interest.

In April, an airplane assembly plant. as an experiment employed 16 girls, and placed some of them in the covering and paint departments, others in electrical assemblies. The experiment was so successful that at the end of the year they were employing 500 women, and were using them in practically all the productive processes in the plant, including the machine shop, and even on the final assembly. Most of the jobs in which they start the girls in this plant take only a few days for breaking-in, and then the girls are upgraded through inner-plat training and supplementary courses. However about 80 to 90% of the girls had had factory experience or other pre-employment training. The plant has these courses 24 hours a day and all are open to women. In addition to other courses some are taking riveting and sheet-metal work. However, this is the only plant visited by this Bureau to-date where all in-plat courses are open to women.

This is the plant whose total employment rose from 1,255 at the beginning of 1940 to 4,500 at the end of 1940, with no women employed at all; and in January 1942 there were over 500 women out of the total of 6000 employed. And here are the reports covering our most recent visits to other aircraft plants -

One plant having none but male employes expects to take on 6000 women by the summer of 1942.

An aircraft assembly plant is making plans to take on more women. At present they have 27 women on the production line, and this may increase to 2000 by summer. They will first be tried in the electrical department and small precision assembly.

In another aircraft assembly plant, consideration is being given to future employment of women; they are being seriously considered for light woodwork operations, electrical assembly, taping and doping, and tube assemblys, at present. There is one woman-engineer in this plant, and 9 women only on the production line.

One large company with branch plants in the different parts of the country is trying out women in one of its locations, with the expectation of hiring them elsewhere as soon as results are known and plans are formulated for various occupations.

As to what might be the picture, if we follow the same pattern as shown in British experience, the aircraft companies here only employ an infinitesimal portion of women, whereas in England they comprise 40 to 50% of the workers. In small arms ammunition work 40% of the workers in this country are women, compared to 80% in Wales.

Now what are the prospects of women being rapidly absorbed into the expanding production program ?

In the first place, new jobs have been created through the 'break-down' of BIG processes into the simpler and less skilled operations. The phenominal need for more workers to produce more fighting equipment makes mandatory a job analysis, to break-down certain processes so they will be within the reach of the great potential women labor supply. A new tooling-up may be necessary. Shorter training periods are called for; haste in production is the order of the day.

These jobs constitute a sort of no-man's land in regard to occupation and sex. They are restricted by no traditions as to whether they should be done by men or women. To draw hard and fast lines between men's and women's jobs is out of the question. The recruitment of women is easier than that of men simply because there is a larger volume of women ready to be hired.

Last week Mr. Hillman said that more than 1,000,000 women will be needed to work on the production of war materials for our 'long, hard war'.

In our present surveys we are finding that women are being employed in the machine shops, on the assembly lines, and at inspection posts.

Some jobs can be done equally well by men or women, such as -

Milling Mchines
Light punch and forming presses.
Bench and watchmaker's lathes
Burring, Polishing, Lapping, Buffing, on lathes.
Packing, Labeling

Some jobs can be done even better by women account of peculairly feminine qualifications; painstaking, tedious work requiring great patience, finger dexerity. Women adapt themselves readily to repetitive jobs requiring constant alertness, if not skill; strong fingers and tireless wrists with no flagging. Examples are -

Drill Presses
Assembly - all types
Winding Coils and armatures
Soldering
Taping
Painting - all kinds (spray, stencil, radium, touch-up)
Visual Inspection

But women can certainly do notably skilled work after training. Women have the ability to work to precise tolerances, can detect variations of ten-thousandths of an inch. Women can make careful adjustments at high-speed with great accuracy. Illustrations of such skill are -

Welding
Sheet-metal forming and riveting
Light turrest-lathes
Light duty hand and automatic screw machines
Setting-up machines
Production planning, routing
Tracing, Drafting

You will want to know in what particular war industries the Women's Bureau has made their surveys, because it is these studies of ours that form the basis for the preceding evaluation of occupations.

We have been in aircraft assembly plants, in aircraft parts plants, on ordinance plants making ammunition for small arms and for artillery, in machine tool plants, in various plants making instruments such as aircraft instruments (speed indicators, altimeters, guages, etc,) optical surgical and dental instruments, and fire-control instruments. By the latter I mean auxillary equipment of a heavy gun for controlling its fire, proper aiming, and setting the shell fuse .

We have been in New England, in the far West, in Texas, and in the middle West, and on the Eastern seaboard.

We have summarized the principle operations and have appraised the employment opportunities for women in the various plants in these industries. In our reports you will note we have shown whether the operations are performed at present by men or women. whether the proportion of women could be increased, whether women could be used entirely, and where with some training women could be used. And we have been frank to say when the job is not suitable for woemn at all. I am going to point out our findings briefly -

In aircraft assembly one-fourth to one-third of the jobs might be filled by women. To mention a few of the departments -

Fifty to seventy-five percent of drill press work could be done by women after training.

All of the jobs in tubing could be done by women.

Twenty to twenty-five percent in fuselage could be done by women.

Thirty-five percent of the jobs in work on wings and seventy percent in the work on control surfaces can be done by women.

Twenty percent of the jobs in press and metal forming could be done by women.

After experience in simpler machines, women can operate light turret-lathes and hand-screw machines, shaping cylindrical surfaces.

In contrast to the aircraft industry plants making small arms ammunition and for artillery already employ large numbers of women. Of twenty-eight operations in small arms ammunition women were only working on seven operations, and it was considered that women could be increased, or used entirely on twelve others. (The remaining nine were unsuitable for women chiefly due to the physical strength required.)

In the heavier artillery ammunition, of the forty-six operations observed, six were entirely in the hands of women, 29 could greatly increase the use of women, and eleven were considered unsuitable. In the mechanical time-fuse department of a government arsenal, three years ago, only two percent of the employees were women; now, ninety-six percent are women. And more fuses are being produced per employe than ever before. There has been a complete change in the break-down of operations.

In plants making instruments women could do 75% of the assembly work in making aircraft instruments. Binoculars are the only fire-control instruments on which women are employed extensively; undoubtedly they could be trained to do some of the work on optical instruments. More women could be used in surgical and dental instrument making; though the former would never afford any marked opportunity for women. In the making of clinical thermometers women are employed on all the major processes.

Women have been definitely handicapped by lack of training. So is anyone. But my point is, that the vocational training courses have not been opened to women as readily as to men, and in some important cases, not opened to them at all. We wanted women to have a place in the defense training program that would give them a start, or send-off in the manipulatice skills in machine operation and bench-work, in inspection,etc. Of 1,772,000 persons given training in the vocational training classes for National Defense since the beginning of the program in July 1940, about 17000 were women (less than one percent) These figures are up to December 1, 1941 and since then, presumably, more women are admitted. The N.Y.A. has trained women up to twenty-five years of age for defense industries, and the W.P.A. has given training to some women.

I am talking about other coirses than power-sewing machine, cooking, or nurses courses - metal work training, electrical work, and the like.

It/seems to us there should be a more noticeable trend toward hiring older women, for dropping the bars that are against women in their late thirties, or even in the forties. Some of those have had excellent industrial experience. A California department of employment shows that some employers were of the opinion that the upper age limit would be extended to 40 and even to 45 years of age; and in our survey there was found to be no noticeable increase or decrease in productivity in relation to age, although the companies generally believed that women over thirty-five would be less desirable than younger women. Conditions now are not normal peacetime conditions - the middle-aged woman whose experience and adaptibility demonstrate fitness should be hired.

Most recent reports of our visits to plants indicate that pre-employment training is not considered necessary for the jobs that women are being hired for, and we look to immediate widespread hiring of women for the so-called first jobs in the factories, the simpler, semi-skilled ones.

If women are to progress and be effectively employed, they should not be restricted to the less-skilled jobs, and we want to see supplementary training opened to them. All aircraft manufacturing centers have training programs for men, but in only one of these plants visited by this Bureau, do we know that all the supplementary courses are open to women - that they can enter any course they choose. We would like to see women taught the related skills, such as blueprint reading, shop mathematics, speeds and needs of cutting tools, and use of scales and micrometers.

Our recent visits to plants show that women are taking up blueprint reading wherever such courses are open to them; other courses chosen by them are machine shop courses, riveting, sheet metal, and drafting. In one plant a few women were recieving supplementary training as lead-men and supervisors. But in its very elaborate apprenticeship training program not one woman was found. An ordinance plant in the middle West sent 20 women and 205 men east for special training in a government ordinance plant, so that on their return they could train new employes.

You will note in our surveys and evaluations of occupations suitable for women, how many of the processes and jobs could be satisfactorily handled by women if only they had supplementary training.

I want to emphasize the availability of trained professional women for plant jobs other than the production line jobs. A news item the other day said that electrical manufacturing companies are asking for women college graduates who have majored in anthematics, chemistry, or physics, to serve as assistant engineers for work on estimates and mathematical computations. Some women will also be able to find positions as radio physicists and technicians. A large manufacturing concern wanted a women college graduate trained in mathematics to teach shop mathematics to mechanics who are taking in-plant training.

Some of the engineering schools of the universities are opening their defense training courses to women. These courses qualify women for positions as dtaftsmen, inspectors, supervisors, engine testing, computation, and a wide range of precision work. There were, in November 1941, 4,436 women enrolled in these courses in 124 colleges and universities.

Supervision of women presents no different problems than supervision of men. But if the foreman resents the introduction of women into the plant - be it conscious or unconscious on his part - or if the men themselves dislike the presence of women, there is not likely to be that smoothness or efficiency that results in adequate production. Certainly the personal officicials, and management itself, should be aware of any attitudes that would impair the organization's highest efficiency.

A California survey made by the California Department of Employment, of plants employing women in war production showed, that as a whole, men and women employes worked satisfactorily together. In all the plants surveyed men and women were employed on the same jobs with the same rate of pay; very often working side by side. One employe preferred to have the men and wmen work together, and believed that the women's higher rate of production would tend to increase the men's rate of production. In some, it was found that at first the men resented the presence of women, ridiculing the idea, and working with them in a condescending manner. In one plant resentment on the part of the plant supervisors was the most formidable obstacle in introducing women workers. These men had not previously supervised women and at first found it disagreeable. But within a short time they found that they were at least as easy to handle as men.

The men workers felt that the women should be employed in the less-skilled jobs, small machine operations, and inspection, and resented the employment of women on machines requiring unusual mechanical ability. Of course, the thoery that women had no mechanical ability, aptitude, or interest, was exploded in the last war.

In all the plants visited in this California survey the employment of women was found satisfactory. In all instances there was an increase in the production per hour and the cost per unit.

The reports we received in January from our own special plant visits are of some interest -

In one large plant (aircraft) all the foremen seemed satisfied with women.

A foreman in the electrical assembly department of an aircraft plant said that only a small part of his force were women but that he could use them on all jobs in his department if he could get them.

Firms in instrument making with large numbers of women, found them satisfactory and made no mention of the disciplinary problems feared by other employers.

One aircraft firm, when our agent visited it, said that discipline was a bad feature of mixed groups. Our agent idid report that the discipline seemed bad, many of the workers were out of supplies, and there was considerable talking and playing among mixed groups of boys and girls; but when it was pointed out to the plant official this was due to lack of supervision and proper management he agreed that this was true.

We believe that it is important to have a woman personnel official on the administrative staff. In some plants we have visited a woman is in charge of personnel matters where women are concerned, or plans were underway to employ one as soon as the entire numbers of women were hired. But in others there is only a matron or so-called hostess in charge of the women's service rooms. These act as counsellers to the girls in some plants.

Working conditions are good in the plants we have visited. The Women's Bureau recommends an 8-hour day with three shifts if necessary. We recommend the wage rates for women, including the entrance rates, be equal to those for men workers. As for night work we believe the investigation of each plant wanting to use women on night shifts should be made by the proper state authorities to determine whether there is a need for such employment. We believe such permisiion should be granted only for the duration of the war. The following stndards that we recommend apply equally to men and women -

Half hour meal period with opportunity for hot meal.

Best possible lighting and ventilating arrangements.

Special effort to prevent, wherever feasible, either constant standing or sitting, through providing seats adjusted to the worker and the work.

Safe work clothing (all the essential accessories (caps, goggles, gloves, shoes)

Carefully guarded machines and all other safety precautions.

Adequate first-aid equipment and medical department.

Adequate washing, drinking, and toilet facilities, also lunchroom, dressing-room, rest room.

Employers who decide to hire women for the first time are in some instances perturbed as to the need to make plant adjustments to women's needs. I do not feel it necessary to make comment on this; practically all plants being built now have provided facilities for women; or can easily convert plant space to them. Some employers, we find, are waiting to add extra facilities when they have completed the extra hiring that is necessary. Only in one plant was the premium on plant space so great that adding service fcilities for women seemed a detrring factor in the hiring of women in greater numbers. The California survey shows that changes were necessary when women were added to the staff, but it was generally agreed that the expense was relatively little. We can give you a few figures if you will write us.

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EFFECTIVE INDUSTRIAL USE OF WOMEN

DEFENSE PROGRAMME

The following excerpts from the Special Bulletin #1 of the Women's Bureau - United States Dept. Labor.

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These bulletins were prepared in cooperation with the Labor Advisory Committee on standards for the employment of women in Defense Work which bears representation from -

Amalgamated Clothing Workers of America
International Association of Machinists
International Brotherhood of Electrical Workers of America
National Women's tRade Union League
Steel Workers Organizing Committee
Textile Worker's Union of America
United Automobile Workers of America
United Rubber Workers of America

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Requirements for the effective use of women in industrial work connected with the Defense Program are as follows -

1 - Physical characteristics of the job must be suited to women's physique
2 - Safety assures continuous production - machinery should be carefully guarded. Speed is a powerful factor in causing fatigue and accidents. Muscular strain is to be avoided if women workers are to produce at their maximum. Minors must not be employed in hazardous processes.
3 - Women require special protection where industrial poisons are used
4 - The fine work many women perform calls for special lighting.
5 - Seats are vitally important for women workers
6 - General plant sanitation and safety is essential
7 - Practical work clothing for women prevents injury
8 - Moderate hours of work result in quantity and quality production
9 - Minimum wage standards and prevailing wage standards should be maintained
10 - Training and employment policies should be adjusted to women's needs
11 - Industrial home work should be prohibited on government contracts

Experience gained by the Women's Bureau in studying the history of employment during the first World War and in the twenty years thereafter is a guide for the participation of women in the defense industries to be expanded during the months ahead.

Though women have proved themselves able to do almost any type of work, careful consideration should be given, in planning a defense program, to their employment

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on processes where they have been found most efficient. Altogether women workers have an important part to play in such a program. The popular belief that women rendered real service during the last war is sustained by the figures showing the number of women employed both in the war agent and implement industries, as well as in war food and fabric industries, also by the preponderance of evidence from employers holding government contracts, and the official statement from the Assistant Secretary of War acting as director of munitions.

Particular attention must also be given to the necessary health safeguards where women are employed, since they are often in jobs new to them, operating unfamiliar machinery, and affected more seriously than men by the common poisons used and found in industry. Extended experience both in the commercial plants and in the World War industries of 1914 - 18 shows positively that the fullest productivity depends on adequate safeguards to health. In no country during the World War did the patriotic enthusiasm, which led to long hours and strenuous work under adverse conditions, turn out precision instruments in quantities necessary for warfare. Nor could such enthusiasm maintain quantity production when harmful working-conditions gradually undermined worker's health.

The Defense Program calling for speed, quality and quantity production can be attained and maintained over an extended period only when working conditions leading to fatigue, di-comfort, ill-health, and accident are eliminated.

The following factors have been found of utmost importance in a program aimed to secure successful production in part through the employment of women workers. They represent general standards, but for some of the particular industries in a defense program further provisions also are essential, and continual investigation and consultation is necessary -

1 - Physical characteristics of the jobs must be suited to women's physique.

Women excel in work requiring care and constant alertness, good eyesight, and use of light instruments such as gages, micrometers, vernier calipers; work calling for little physical exertion. Characteristics of such jobs are, inspection of castings, machinings and finished parts, powder routine analysis, and electrical instrument equipment.

2 - Women excel at work requiring manipulative dexterity and speed, but which permits the individual to set her own tempo and to work in a sitting position.

These are characteristics of bench work calling for laying-out for machine operators, operating small machines for finishing small and irregular parts, assembling delicate instruments and machines, loading shells, and filling powder bags.

3 - Women excel in work requiring skill but little strength, either in handling parts or setting up machines.

These are characteristics of drilling machines, lathes, milling machines, grinding and polishing machines operating on small parts.

Women operate large machines successfully on heavy work when such work, whether done by men or by women, requires the use of lifting devices and pneumatic chucks.

Safety assures continuous production .

Various estimates of the costs of industrial injuries run into millions, and those do not include the various incidental costs, which are found by analysis to be four times as great as compensation and medical payments. All possible methods of protection should be used to prevent injury from unguarded machinery, excessive speed, muscular strain, explosive chemicals, fumes, acids, dusts, or other harmful substances or conditions. This is especially necessary where women are employed on processes new to them. They will come in contact with complicated machinery and will need to handle dangerous materials and irregular and sharp objects.

Machinery should be carefully guarded .

Power machines cause two-thirds of women's permanent partial injuries, such as loss of fingers and other memebers of the body. The punch press is responsible for half of the machine accidents. Typical accidents to women resulting from poorly guarded machines indicate the problem. In matters of testing machine guards and improvising more adequate guards, the State departments of labor and the U.S. Dept, of Labor may always be consulted. The American Standards form a fine guide, as well as the National Safety Council pamphlets.

In some cases the guard may be applied to the worker instead of the machine. From the number of goggle lenses shattered and replaced for workers in 166 steel mills over a recent two year period, a well known labratory estimated that over 2,397 eyes were saved, also $4,000,000 and plenty of untold misery.

Speed is a powerful factor in causing fatigue and accidents .

The speed involved in modern machinery is one of the factors demanding that every part be in perfect working order to prevent accidents. Rapid processes are required for example, when a shoe worker revolving the shoes so as to trim all excess leather, from the uppers, completes 5200 shoes a day.

Muscular strain should be avoided if women are to produce at the maximum .

Consideration should be given to the weight-lifting involved in the job, with provision for special lifting devices for continuous lifting, or for heavy loads. Physical work depends on the total load carried per day, average load carried at one time, and the duration of that carry. Conveyor systems are the answer for the continuous flow of materials in one direction. The lift-truck, hand or power operated is one of the greatest energy savers, and eliminates motions hazardous to hands, feet, or back. The stacker or tiering machine eliminates muchh heavy work and many injuries due to handling mterial. Six states prohibit using women at tasks involving lifting or carrying heavy weights. Specific limits vary from 15# to 75#. The limit should be lower for girls under 18 years of age.

Minors must not be employed on hazardous processes .

The Federal Fair Labor Standards Act provides that no girls under 18 may be employed on types of machines or in occupations determined to be hazardous by the Children's Bureau. The Public Contracts Act provides that no girls under 18 may be employed on production under Government contracts.

Women require especial protection where industrial poisons are used .

Women are likely to be more seriously affected than men by some poisons, and certain of these are used to a considerable extent in connection with various processes well adapted to women's abilities. The need for constant study of materials and substances, especially where newly used, cannot be too strongly stressed. Examples of substances that have a peculiar effect on women are -

Benzene - Which may be disposed to hemmorhage. This is used in explosive plants, airplane factories, in doping wings, in rubber factories, shoe plants and etc.

T N T - Dimitrobenzene, sulphuric ether, and various widely used producers of skin irritations (dermatitis) Women were employed extensively in explosive manufactories and loading explosives.

Carbon Disulphide - Which is used in rubber and artificial silk making and manufactired articles. The dangers of this powerful poison seem to be more recently understood. It attacks the nervous system producing an effect similar to insanity. This serious hazard can be controlled by good workroom ventilation and local exhausts.

Lead - Used in rubber and storage battery plants and in spray painting, as in auto plants. It is perhaps one of the most common poisons in use in modern industry. While in some industries the hazard has been practically eliminated, other industries, plants, and processes develop its use.

Mercury - Which is used in chemical plants, in photographic supplies, in browners on guns.

Arsenic - Which is used in chemical plants, by electroplaters, and by workers on enamel and on rubber.

Silica Dust Which is produced by grinding and polishing machines on which women work, and unless it is entirely removed from the air it produces an incurable lung disease.

Exhaust systems are absolutely necessary to prevent the air from carrying to the worker the fumes from the poisons just listed, and from many other acids or chemicals such as wood alcohol, ammonia, and etc; from gases such as carbon monoxide, and from dust such as that caused by silica. Individual respirators often are needed where the process brings the worker near to such fumes and gases. All equipment should be inspected frequently to make sure it is not worn or leaking so that it no longer protects. Furthermore individual respirators are often not sufficient to take the place of adequate exhaust systems, and in case of some substances like silica dust, it is absolutely necessary to have this removed from the air at the source by proper exhausts or by effective wet methods.

Where lead is used the worker must be protected by effective exhaust systems, and depending on the process, by gloves and individual respirators as well, and there must be provision also for frequent washing of hands and other exposed parts of the body.

Food should never be used or eaten in the workroom where such poisons are used.

No easy panacea exists for protecting workers from all poisons. There must be continual study of the use of new substances, the methods of their use, and the employment of better known materials in new processes. For the substances that have been long in use in industry, protective measures are known. New processes are constantly being developed and this may mean the introduction of new substances whose effects are less well-known.

The fine work women perform calls for special lighting .

Workers in poorly lighted factories are, in effect, partly blindfolded. Minimum requirements are as follows -

1 - Sufficient illumination varying with occupation
2 - Proper distribution of light to prevent glare and shadows
3 - Consideration of lighting problems in seating arrangements
4 - Special aids for fine work

The National Safety Council states that 15% to 20% of all industrial accidents are due to poor lighting.

In a steel machine shop in Chicago an additional lighting cost of 2% of the payroll produced an inrease in production of 10%.

In Great Britian glasses to releive eyestrain were furnished drawers in textile work, and soters of lamp filaments which are about half the diameter of human hair. relief afforded increased output 8% to 26% for drawing-in and 20% for filament sorting and mounting.

A detailed study of errors in typesetting under different grades of illuminating found maximum fatigue when minimum light was provided. The quality of the worj suffered as judged by number of errors, until the illumination reached 24.5 foot candles.

Lighting in measured in foot-candles - one unit representing one candle at a distance of one foot. It is determined by a small measure that can be carried about in the plant. The following standards for artificial lighting are the minimum needs for workers in various occupations according to the Illuminating Engineering Society ; The illuminating for natural lighting should be at least four times the minimum specified for artificial lighting -

	Foot Candles
Automobile manufacture - assembly line	50 to 100
Cotton - Spooling, spinning, drawing, warping, quilling, inspecting, knitting, slashing	20
Woolen - twisting, dyeing	10
Drawing-in, warping - light goods	15
Dark goods	30
Weaving - light goods	15
Dark goods	30
Steel and Iron Mills - Automatic machines, light and cold rolling, wire drawing, shearing, fine by line	15
Rubber Manufacture	10 to 20
Airplane - repair department	30 to 50
Foundries - core making	20

Seats are vitally important for women workers .

Arrangements should be made so that women can change from a standing to a sitting position. The right kind of chair should be provided, adjustable to both the worker and the particular occupation. A New York study of seating for women disclosed the following -

Providing chairs and tables suited to the particular occupation increased production in a rubber factory so that 16 girls performed the work of 20

A foot-pedal operator who has to strain unduly to reach the pedals suffers from pelvic congestion with resultant harm to pelvic organs

Additional installation of satisfactory foot rests and pedals in an electrical supply factory eliminated much fatigue

Women polishing metal could increase their output as much as 32% when special seats were provided to make it possible to work either seated or standing

In muscular work output has been found to increase from 2% to 13% when workers could alternate sitting or standing. Dr. Vernon, a foremost British authority concludes that such changes are more benefit than rest-pauses.

Ganeral Plant sanitation and safety are essential .

Clean and well ordered establishments are necessary for health of workers, and for their greatest production as well. This includes -

Washing Facilities -

Washing facilities in convenient locations with hot and cold water, soap, and individual towels are essential, as is their instruction in the proper use of them. Some more or less serious forms of skin infection may result from many of the substances used in industry. When processes require use of certain poisons, it is essential that hands be cleansed frequently.

In a recent study in Pennsylvania of persons at work in insulating wire where the skin came in contact with chlorinated napthalene showed that this resulted in skin affections in about three fourths of the workers reported. Children of the parents having this dermatitis were also foubd infected as a result of the material being carried home on the skin and clothing of the workers. Both New York and Pennsylvania found that the disease could be prevented, by adequate ventilation and in addition proper personal hygiene fabilities including regular wash periods, soap, individual towels, hand creams, and lotions for protection.

Dr. Joseph V. Klauder, noted Philadelphia skin specialist, found that lack of adequate washing fabilities, or the use of harmful agents for cleaning was the cause of much dermatitis. An enormous number of cases were caused by using harmful removers in factories for cleaning the hands. A woman in a printing shop used turpentine and kerosene for years for the removal of stains from her hands and forearms. Dermatitis infected these parts. A patch test showed she was sensitive to turpentine. A woman employed as a machine seasoner in a tannery experienced dermatitis of both hands. For many years she had been using hypochlorite of soda to remove stains from her hands and this material was the cause of the infection.

Adequtely equipped lunch room, dressing room, and rest room .

These are necessary not alone for the convenience of the workers. A very real health hazard may result if food is eaten or street clothes are hung in the work room where poisonous substances or tools that may carry germs are in constant use. For example among the measures for the prevention of lead poisoning are separate rest rooms and dressing rooms, from the work place.

Working efficiency is reduced if work is continued a long time without food, according to studies made by Harvard University. Facilities for getting a good noon meal reduce sickness, absenteeism, and fatigue.

Margaret Bondfield, fomerly at the head of the department of labor in the British Cabinet stated that in 1914 when cafeterias were put in British munition plants, men and women workers had, for the first time, hot meals on workdays. Production, morale, and general health were favorably affected. In this country men coming into the C.C.C. camps after a period of unemployment and consequently lack of proper food, gain from 8 to 10 pounds and their efficiency greatly increases.

Good drinking facilities .

Pure cool water should be provided in places provided for workers, with individual cups or sanitary bubbling fountains. Drinking water can promote health or spread disease. Water will carry disease germs due to impurities at the source of supply or coming in contact with any other impurities with which it may come in contact before reaching the drinker's mouth. It may be contaminated through storage, distribution, cooling, or by the manner in which it is served. These sources should be carefully investigated.

Among the diseases known to have been transmitted by the depositing of germs upon drinking devices are - Influenza, diphtheria, scarlet fever, measles, whooping cough, cerebrospinal meningitis, polecmylitis smallpox, chicken pox, mumps, septic sore throat, syphilis, tuberculosis, pneumonia, and common cold.

The effect of hot heavy work in sapping strength and reducing production can be averted by additional supplies of salt to replace that lost through profuse sweating. Where heat fatigue may be a problem, salt tablets should be available in containers near drinking fountains. Dosage recommended is as follows -

Light to medium work	5 to 6	tablets daily
Medium to heavy work	8 to 10	
Extra heavy hot work	12 to 15	

A large steel company in Ohio used to have as many as seven to eight cases of heat cramps and heat sickness a day during hot spells. They installed a few salt dispensing machines with such good results that now there is one at every drinking fountain. In a later check-up only one case of heat cramps occurred during the entire summer.

In another case, a medical director of an eldctrical supply company engaged in manufacture stated that cases of heat sickness had been common before the use of salt tablets, but were now rare.

Separate toilets for women .

Toilets should be in locations convenient to workrooms. They should be kept in a sanitary condition. An adequate supply of toilet paper should be provided. Washing facilities should be located nearby. A ratio of at least one toilet facility to every fifteen women is recommended by the Women's Bureau. It is important to have outside ventilation.

Ventilation.

Ventilation of the plant should have special attention based on scientific knowledge. This is of particular importance to the health of workers in defense industries, because injurious chemicals often must be used. Safe ventilation includes attention to temperature, humidity, air motion, and special removal of injurious vapors, fumes, gases, and dusts peculiar to the industry. The following minimum requirements have been developed by experts in that field -

Supply of fresh air of not less than 1000 cubic feet per person per hour.

Adequate air movement of 20 to 40 feet per minute in winter and higher in the summer.

Relative humidity not to exceed 70% and preferably less.

In work with poisonous vapors or dusts -

Prevent escape of gases and dusts in the air
Use exhausts to remove these substances if they are present
Provide adequate ventilation and movement of the air
Provide masks where necessary

General Plant housekeeping .

Every floor needs thorouhg daily cleaning to remove oils, grease, and materials that may cause falls, and to remove dusts which may be otherwise health hazards. Falls accounted for about 4,000 of the 27000 compensated injuries in manufacturing in New York in 1937. Removal of dusts from all surfaces also removes fire and explosion hazards. Suction methods of cleaning are preferable. If sweeping is done, the floor must be moistened or sweeping compound used to prevent raising dust.

Provision of medical department .

It is essential in carrying out health and safety measures to have the services of an industrial physician who may be continuously on duty, or on call; and also an industrial nurse. The well qualified industrial nurse can produce pinancial returns. One plant of 400 employes reduced its accident frequency 30%, cut down the number od days lost 87%, and decreased medical aid cases 54% through the employment of an industrial nurse.

Committee of workers .

Every plant should have a committee to whom harmful conditions of all kinds may be reported, and who will cooperate with management in safety education work.

Days of rest .

Days of Rest .

At least one and one half and preferably two days rest should be allowed in every seven days. The value of such a break in working time for the health and efficiency of women workers was stressed in a committee report in Great Britian in 1915. This report also dealt with the detrimental effect of long hours, including the seven-day week that had been used during the first year of the war with the hope of speeding up production. The study proved the value of the changed policy to shorter hours. It stated, if the maximum output is to be secured and maintained for any length of time, a weekly rest period must be allowed. Except for fairly short periods, continuous work is a profound mistake and does not pay; output is not increased. The importance to women of a wise limitation of their hours of work and an appropriate distribution of the pauses in those hours can hardly be overstated. The weight of scientific evidence is behind such limitations and without them health and efficiency cannot be maintained. This committee concluded that a portion of Saturday and the whole of Sunday should be available for rest.

Time for meals .

A regular time should be set for any meal eaten at the plant; the period allowed to ~~be~~ vary from 30 to 60 minutes according to circumstances. Working efficiency is reduced if work is continued a long time without food.

Rest periods .

A rest of at least ten minutes in the middle of each 4 hour period without lengthening the work-day is essential. The worker should not have to pay for such rest periods. A survey of 104 establishments in the United States after they had introduced the rest periods showed the following -

Firms where there was concentration at tasks showed a definite improvement in quality of production. A firm employing 13000 women reports great improvement in quality and quantity of work after rest periods were introduced. In one group of establishments rest periods increased output 2.8% and in another survey of other groups, after some months of this practice there was an increase of output of 6.2%.

Employees coming under the Fair Labor Standards Act must be paid for rest periods up to 20 minutes duration the Administrator of the Act had decreed.

Overtime .

Overtime should be avoided as far as possible. The following illustration gives the detrimental effect of overtime -

The British Committee on health of munition workers stated - Flagging output characterizes the output during the last hours of the work-day and the disadvantage of overtime is generally recognized by employers. A motor-plant on an 8-hour day and a metal-plant on a 10-hour day are compared. In the last hour of the work-day in the 8-hour plant, even allowing for the stoppage of machinery,etc., showed a an output below its efficiency of 10.2%, while the 10-hour plant showed 20.9%.

When overtime is necessary it should be spread among all available workers. Overtime wages should be time and a half for each hour in excess of 8 hours a day or forty hours per week.

Training and employment policies should be adjusted to women's needs .

The program of rapidly expanding production in defense industries calls for sound employment policies; otherwise discontent among workers and dislocation among industries may result to retard and cripple progress unduly. On the other hand elimination of causes of friction will make for a satisfied and satisfactory labor force and greater output.

Such policies must be carefully worked out both from the viewpoint of defense program and the normal manufacture of goods. The situation must be analyzed in regard to men and women workers, both those having jobs and those seeking jobs. Attention must be given to the needs of the present situation in relation to future needs, particularly the period just following the completion of the emergency program.

Dislocation .

Effort should be made to prevent dislocation in industry that is bound to result if women and men are drawn from their regular jobs into expanding defense industries. The present emergency program is not so acute as that during the first World War, when considerable sudden shifting of women to take men's jobs was essential. Also today there are large numbers of men and women available to take new jobs.

Training .

Training in the plant is usually necessary for workers employed in processes new to them. But in many instances women may requite womewhat more extensive training than men require. This is due to the fact that girls are not given the same opportunity in vocational schools to secure a general mechanical training and background.

Women should be trained in a special section before being assigned to the production room, especially for work in divisions hitherto staffed by men. This arrangement permits the weeding-out of unsuitable workers and the developing of best methods. It also prevents the slowing up of work in the production room that is bound to result from the presence of efforts of inexperienced workers.

When a foreman must train women, care should be taken to choose one who is able and willing to do this task; and who understands the lack of knowledge of mechanical terms or on the part of many women. During the period of 1914 - 18 the training sections varied from a corner of a work room to a whole section in large extablishments for the training of women. The typical class was about 30 women at a time. Arithmetic, blueprint reading, the use of various measuring instruments were taught in addition to the operation of machines. The length of the course was from 10 days to 3 weeks.

Training in the plant should be the legitimate expense of the employer. Women as trainees should be paid an hourly rate until they are ready to go on production work.

Personnel Management .

The appointment of a competent person as employment executive where women are employed, with responsibilities and powers for conditions and policies affecting women, is necessary. A well-qualified woman in such a position usually will get the best results.

Collective bargaining .

Opportunity should be given women workers to participate in trade union organization and collective bargaining, which has been established by law as fundamental rights.

Women should be included as employee representatives charged with responsibilities for mainenance of existing standards or development of other desirable standards.

Industrial home work should be prohibites on government contracts .

Home manufacture is not likely to result in best production methods. During the World War dirt and disease was found in homes where army coats and clothing was found piled in dark bedrooms and in heaps in filthy floors.

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Lifting heavy weights in defense industries .

Methods for conserving health of women workers .

Woman's Bureau - U.S.Dept. Labor - Special Bulletin #2 .

Factory employed women in peacetime production are in light work almost exclusively. In a recent investigation by the Women's Bureau in the metal and machinery manufacturing industries in New Jersey no women were found lifting or carrying weights over 25# .

Experience both in this country and abroad has shown that in war industries women's employment involves lifting much greater loads. It is fairly certain that women in this country will soon be employed on much heavier work processes in defense production, with the immediate demands for rapidly increased output and the possible later shortage of male labor. Hence it is important to review the conditions that have been extablished as necessary to health of women workers when engaged in processes demanding heavy lifting.

In the Bureau's recent study it was found that some of the metal and machine plants had employed women for heavy work in 1914 - 18 and were considering their use at similar work for the present defense program. This work included -

Shell inspection - 50# . Shells would not be carried by the women, but lifted, turned, and rolled on an incline table.

Truck driving and loading. Lifting of various amounts into trucks.

Hand core-making. At present women work on cores of 25# or less. In the case of labor shortage they would be called on to make larger cores.

Work on screw machines, lathes, and presses, in which the material worked on is of heavy material.

The time of jobs that women will be erquired to work on where more weights are handled is also shown by past experience. A partial list in which women lifted various heavy materials in the World War industries indicates what may be expected at this time -

Lathe operation on heavy work. Heaviest in munition plants where they cut shells from 19# to 100# . In the heaviest types mechanical lifting weights are available.

Operating automatic gear-cutting or shaping machines to cut spur and bevel gears. Blanks in which gears were cut by women were very heavy.

Turning metal into rods, bars, wires, and sheets. Feeding and receiving strips through rolls. Much of the work entailed lifting of heavy ingots.

Core-making. The heaviest core made by hand by women most successfully was 45# .

Loading shells. Lifting shell, (weighing from 20# up) holding plug against revolving shaft, which grasped plug and unscrewed it.

Labor in petroleum refining. 369 women were found in 6 firms. (laborers in various types of work)

Tire-making processes. This involved lifting tires 14# or more on and off spools. In some cases men were hired to do the lifting.

Unskilled manual labor. Much of this work involved pushing and lifting heavy materials. The maximum weight pushed by a woman was 750# .

Loading and unloading. Transporting material. Shoveling sand and coal. Piling boards in lumber mills.

In Great Britian still further types of work were done by women that was termed heavy work. In examination of 3000 women they were found doing severe muscular work in the following occupations. -

Chemical works. Navvy work. One woman shoveled from 20 to 25# crude borite (tons) per day. She lifted it to a heighth of 2 and one half feet.

Brick setting and drawing. Filling and emptying ovens. Each girl carried 3 or 4 bricks weighing 26-3/4# each. Distance of carry 70 yards.

Tin-plate industry. Opening, cold rolling, reckoning, pickling. Lifting was an essential part of each progress. The average proportion of load to body weight was found to be 58% for young girls.

Senitary pipe-manufacture. Carrying pipe of 24 to 30# some 40 yards to be dried. Average weight lifted 6.6 tons per day. Also feeding pipe-making machines with wedges of clay. Physique of girls in this industry was por.

Nuts and bolts. Press operators carried pans of nuts and bolts to their benches, the size of the load being left entirely to the worker. One woman carried as much as 93% of her body weight.

Pottery. Carrying of tiles, and baskets and bungs of biscuit ware. Ordinarily two women carried the basket between them.

Paper. Carrying bundles of paper for sorting. Average load 57% of worker's body weight.

Aerated water and beer bottling. Stacking crates to heighths sometime exceeding heighth of worker.

Woolens and worsted. Load of 180 to 190# pounds carried by two women.

Guard against injury to physique in the lifting of heavy weights.

Much that may be said as to the proper methods of saving human energy in weight lifting applied to men as well as women. Moreover new applimations of energy-saving lifting devices in industry are appearing constantly. However, there still are important p physical factors that must be considered as applying particularly to women.

Limited strength of the average women precludes her employment in work that is excessively heavy.

It has been found that the strength of the average woman is little more than half the strength of the average man. This has been substantiated again by recent reports, which continue to agree with quite early studies made in Great Britian and other European countries.

The International Labor Office accepts the results of Josephine Joteyko's researches in France. She found that tests gave the index strength of women by the dynamometer as 570/1000 that of man. The index of resistance by the ergograph as 679/1000. Research by the British Industrial Fatigue Resarch Board substantiates these findings. Still earlier, in fact 55 years ago, the Anthropological Institute of Great Britien and Ireland concluded that the female differs from the male more conspicuously in strength than in any other particular. This conclusion was reached as the result of a study made by a pioneer in this field, Sir Francis Galton, who made careful examination of almost 6400 adults, 4,726 men and 1,657 women.

Heavy lifting especially affects women's physical structure.

Continual lifting of heavy loads results in deformity of bone structure that may have serious effects on childbirth. To quote the International Labor Office -

'When women have habitually to carry heavy loads skeletal deformities are noted to spinal and lower limb structures; alterations in thoracic cavity and abdominal walls. Thus for example, a broadening in the lumbar region of the spine in women who carry loads, with crushing together of the vertebrae, bringing about diminution in heighth, deformity of the pelvic basin, with harmful effects on the development of pregnancy. Occupational cramp of the lateral muscles of the neck, pains of the brachial plexus, suboccipital nerves, moveable kidneys, cardiac and thyroid hybertrophy,etc, have been reported.

During pregnancy marked variations should be considered in connection with weight lifting. Respiration, pulse rate, composition of the blood, and so forth, which even in normal woman differ from those of man, show more marked variations during pregnancy. Pregnancy affects the work of the heart, increases the volume of the blood, the venous blood pressure and the heart rate and displaces the heart upward. There is a noticeable diminution of the amplitude of the respiratory movements, and a diminution of muscular power.

Similarly, some authorities have found that lifting aggravates menstrual troubles. A Russian investigation showed menstrual troubles among 69% to 78% of the women who did heavy lifting and carrying as against 26.5 to 39.2% among those in the occupations not requiring liftinf and carrying. These findings were based on a study of 1450 women in peat, coal, and metallurgical industries. As a control, woman in textiles and tramway conductors in Moscow were selected. The troubles referrred to were most frequent in the younger groups - 19 to 25 years of age. Inquiries showed the difficulties to be in direct proportion to the occupational effort.

Analyze the elements in weight lifting to develop methods of saving energy.

The elements entering into weight lifting and carrying must be analyzed, and conditions and methods of work adapted to the worker, in order to promote efficiency in the employment of women in occupations of a heavy nature. To do this, scientific study should be given to the following factors, both separately and in combination -

Weights of units lifted.
Ratio of load to body weight.
Quantity lifted in a day.
Levels of lifting.
Compactness of load.
Distance and changes in level in carrying load.
Interference of loads - with normal gait, with normal respiration, with normal center of gravity, with local movement, i e , pressure on joints or bones, or chafing of skin,etc.
Temperature and ventilation of workplace.
Method of,lifting - wide stance results in strain on groin, and lifting with shoulders lower than the hips results in strain on back muscles.

Overcome the dangers involved in lifting heavy weights by using certain methods.

The analysis in the foregoing points naturally to the means for the most efficient employment of women who must use heavy materials or carry loads in connection with their work.

Provide efficient conditions for work .

The first step would be to plan the best possible arrangement for the work. Such arrangement should include - reorganization of work layout so as to eliminate lifting from one level to another. Vertical lifting is most costly in energy. Much of the lifting women do in feeding machines can be eliminated by having the material on a level with the machine - where lifting is necessary have the material so arranged that the worker does not have to stack above her head - reorganization of work layout to shorten distances where carrying is nevessary - Temperature and ventilation standards are of particular importance, especially in heavy work where allowance should be made for ,loss of excess heat without undue chilling of the body.

Inform workers as to proper methods of,lifting .

First indtructions to worker are not sufficient. They should be repeated to her often. Women in particular should be informed of the methods that produce abdominal strain - to keep their feet close together and to the object; feet approximately 8 to 12" apart.

Young girls need very special supervision and training in proper methods of lifting and carrying. Studies show that younf girls may suffer seriously from lifting because of the possibility of malformation in bone development. Young girls and boys lack the judgment to concentrate on and determine the unit of weight to be lifted. Investigation showed that a girl suffering from a strained back was carrying about two and a half times the normal load, though she had to walk only about thirty feet, because she was working on a bonus system and wished to save time. Others were doing the same thing.

Some methods of,lifting and of carrying loads are much more efficient and less tiring than others, and workers should have instruction in these methods. Back muscles are protected from strain and exert a minimum of effort when the worker bends her knees, crouches by the object, then lifts by straightening the knees and standing erect.

A frequent cause of back injury is improper lifting, that is, lifting with the back muscles instead of the leg muscles. A special survey by the New York Dept. Labor found 72 cases of back injuries to women lifting heavy materials in industries in 1930.

Train workers to use the most economical methods of carrying weights.

The major considerations in the carrying of weights is to secure the greatest economy of effort consistent with efficient work and to assure freedom from strain in carrying that must be continued for some time or for a considerable period.

Of the common methods of carrying by women in industry the most economical and comfortable is carriage on the shoulder. This method leaves free the lower limbs and does not result in fixation of the chest.

Tray carrying, a common job requirement for women in factories as well as in domestic work and other service occupations. is satisfactory only for short dustances and irregular work. Local fatigue in arms and wrists is marked in continual transportation by this method. There may also be unpleasant pressure on abdomen and thighs. The tray may interfere seriously with normal gait and alter body posture to the point of greatly increasing fatigue. Prolonged work with such loads may result in a habitual slouch. A load carried in front of the worker may interfere with the vision of the floor surface and be a cause of falling. Heavy loads interfere with respiratory and circulatory functions. Where this type of carrying cannot be avoided, work periods should be appropriately short, or rest periods should be especially frequent.

Carrying bundles at the sides, one in either hand, has the advantage of not disturbing body balance and not interfering with freedom of locomotion. However marked local fatigue in hands and arms makes this an impractical methos for long continual work. The drag on the shoulders also interferes somewhat with respiration.

Carrying on the hip requires bending of the body to the side to compensate for the lateral load. It interferes with normal walking and to some extent with natural breathing. Workers find it particularly tiring because of fatigue to the arm and rubbing of the hip. For certain purposes it may be an advantage since the load can be take up from the table with ease, and it leaves one arm free.

If awkward postures in lifting and carrying are unavoidable, they should be maintained for only short periods. Rest periods have been used with good results in heavy industries. They are essential because of the effect of lifting and carrying on respiration - the need of making up oxygen deficits - . The length of such rests should be related to the duration of the periods of muscular work and its severity.

Protect the health of workers in heavy industries by physical examinations .

During the World War good results in protecting the health of women workers were obtained in some companies by pre-employment physical examinations. Where the employment rights of the worker are adequately protected, such examinations are advisable in heavy industries employing women.

In these examinations it is especially important that proper safeguards be assured for the worker. It is suggested that a plan similar to the Wisconsin plan be put into effect for that purpose. This plan, adopted unanimously by Organized Labor, calls for examination to be made by a physician selected by the employer. In event of grievance the examined employee makes written complaint to the State Industrial Commission, an investigation is made, and if the grievance is justified the employer is required to have all further examinations made by another physician.

The job should be fitted to the capacities of the individual. When a prospective worker gives a history suggesting disorders such as tumors, or complications of pregnancy, examination should indicate whether the carrying of heavy loads would be suitable work. In every case the medical history should include a definite statement about the interval between a previous pregnancy and employment involving heavy lifting.

Of course there are many disorders peculiar to women that should preclude employment in heavy work and should be found in examination prior to employment. Such examination should weed out cases of heart disease, hypertension, obesity, neurocirculatory asthenia, tuberculosis, hernia, and other conditions.

> State regulation of weight lifting is more effective through the general authority granted regulatory bodies than through specific laws fixing maximum weights.

Though research has indicated that the most economical load is about 35% of body weight, there are so many variations both above and below this figure in individual cases that scientific establishment of a maximum that would supply all women is impossible. All the elements in weight lifting, such as compactness of loads, levels in lifting, and so forth, must be considered as well as the physical characteristics of the individual who is to do the work.

In line with the method of protection through individual physical examination, State administrative bodies engaged in factory inspection should have authority to inspect and to advise and fix rules concerning conditions under which women work where the jobs involve heavy lifting.

The present State regulations are inadequate as they now stand, and serve chiefly to show that a need for protection of women had been recognized in six of the states. These are California, Massachusetts, Ohio, Pennsylvania, Utah, and Washington.

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SAFETY CLOTHING FOR WOMEN IN INDUSTRY .

Special Bulletin #3 - Women's Bureau - U.S.Dept. Labor

The well dressed woman in industry is a safe worker
Clothing suitable to the job helpd to avoid accidents
Consider your feet first
Wear your goggles you cannot replace an eye
Wear a cap around moving machinery
Work dress must suit the job to be safe
Hand coverings can prevent skin infection and other injury
Jewelry has no place in the factory
Jobs with special dangers require special kinds of work clothing

The well dressed woman in industry is a safe worker .

Safety clothing is designed for its attractâveness as well as its utility. It has become fashionable to dress and act so that accidents cannot happen. The girl who was afraid to carry a mirror lest she bring bad luck by breaking it has become the girl who knows that accidents have definite causes that can be avoided.

Clothing suitable to the jobs helps to avoid accidents .

Safety conventions have so far recognized the importanse of safe clothing that they have included on thier programs 'fashion parades' of clothes designed especially for industrial women. Designers have in mind, first safety, then convenience, comfort, utility, wearibility, cleanliness, and coolness. Attractiveness is given due consideration.

In selecting the materials for uniforms it should be borne in mind that lightly starched fabrics are said to be more resistent to fire than are fabrics without starch, and that cellulose fabrics are more inflammable than cotton.

Safety clothing of various types has saved many thousands of workers from permanent crippling, disfigurement, or blindness; and many more from loss of work, weeks of pain and illness. Much fatigue and nervousness can be laid to badly-fitted shoes. If you suffer from chronic fatigue or pain in your feet, or in the muscles of your legs, ask the plant physician or nurse to advise you about the right kind of shoes to wear.

The correct shoe is long enough to place the ball of the foot on the tread of the shoes. The shoe allows for the natural spread of the toes, and fits snugly around the heel and instep. The heel is medium or low. The foot should always be measured with the standing weight placed on the measuring rule. The width should be fitted as carefully as the length. If deformities exist, excercise and mechanical devices will help.

High or run-down heels and thin and worn soles can be the direct cause of a fall. Well-fitted shoes with good heels and soles can help to maintain footing on a wet or slippery floor. Falls are a major cause of women's injuries in industry, and they are especially serious and cause much loss of time among the older employes. Important causes of falls are wet and slippery falls, and other evidences of poor factory housekeeping.

Some occupations require the wearing of safety shoes. Usually this is necessary where there is danger of dropping heavy weights. They are as comfortable to wear and just as attractive as the ordinary shoe. Such shoes with reinforced vamps have saved the loss of many toes. Several nationally known firms make them in all sizes for both men and women.

There is a specially designed foot protector made for girls working in an optical glass department. Made of chrome leather it has a piece of aluminum curved to fit the top of the foot. This is a protection to the instep and top of the foot against falling glass and other objects. When workers handle acids, or where conditions of great hea and moisture exist, wooden soled shoes have been designed.

Women who work where explosives are being manufactured or handled must wear shoes with sewed or wooden pegged soles and heels with copper nails.

Wear your goggles you can't replace an eye .

Wear an approved safety goggle in all types of work, even that remotely hazardous to your eyes. Accidental eye losses cost industry about 50,000,000 dollars a year. They cost each worker who loses an eye his most precious possession, his sight. In New York alone almost 2000 workers suffer eye injuries severe enough to make them eligible for compensation benefits. The most frequent cause is flying bodies. Other causes are tools and machine parts and splashing liquids. No one can tell when or how an eye accident will happen. Precautions should always be taken.

Goggles are made in light-weight frames to wear by themselves or to fit over prescription lenses. There was a time when goggles were crude because a glass had not been developed that would withstand heavy blows. Now glass can be so tempered it will not shatter with any blow.

One company mounts on a bulletin board each pair of goggles that are broken and the object that caused the break. Most of them come from men and women on jobs that does not seem dangerous to the eyes. At least one large manufacturing firm requires that goggles be worn on every job. Also visitors must put them on before entering the plant. The company saved itself $115,000 by this requirement in a space of two years. More important it saved at least a hundred eyes in 10 years.

Among the jobs where goggles should be worn are, upholstering and sewing-machine and grinding operations. Goggles have saved more than one eye in sewing machine work.

Wear a cap around moving machinery .

In a government arsenal employing women a statement was made recently in answer to this Bureau's inquiry, that a woman's hair is the greatest hazard in her employment on machinery. It is possible for the electrical attraction in moving machinery to draw free hair into the machine with very terrible results. For this reason a net should be worn or else the hair should be cut short.

After years of experiment a company employing many women at work with revolving machines, and some in dusty operations, has decided on a uniform head covering attractive in appearance as well as affording maximum protection.

Twp problems are present - confining the loose hair and preventing the possibility of revolving machinery cathing in the hat and then in the hair. The distinctive features of the cap decided on are its heighth (the top does not touch the girl's head) and its stiffness (will not catch in machinery). The head size is not small

, so the hat would be thrown off even if the girl did strike a piece of machinery. One girl, after wearing it at her machine operation for several days, remarked that never before had she realized how close she was working to her machine. The touch of the cap warned her when she was too close.

Wearing a net to cover all hair and hold it close to the head may be necessary where a girl has a lot of hair and the hat does not entirely cover it.

In one company the management arrived at the best solution to its hat problem by cooperating with the girl at the machine on questions of design, material, and comfort. Suggestions for such a uniform headdress can be given by the workers after the problem has been outlined to them.

After careful consideration the National Youth Adminsistration has adopted a cap for its girl employes in factory work. This cap is visored to shade the eyes, is full so that all the hair may be covered, light, comfortable to wear, and washable. In jobs where dust of any kind is present, and they are many, A well-fitted cap of closely woven and easily laundered material adds to comfort and health. There is head covering designed to protect women's head and hair from the effects of bicarbonate of soda and is made of white baptiste in the shape of a triangle and hemmed on all sides (edges) Wrapped around the head and tied in front it furnishes complete protection.

The time has passed when clothes selected for the Easter Parade may eventually become work clothes, no matter how unsuitable. Tight fitting garments cause strain that increases fatigue. Loose, full dress around moving machinery invites serious injury.

The girl working in airplahe repair should wear slacks and blouse with short cuffless sleeves, or short-sleeved overalls, to give freedom of movement without danger of catching on protruding equipment.

A similar uniform is necessary for women working near any moving machinery. It may be slacks and blouse, overalls, or one of the many types of knicker suits that have been designed. The important things to remember when dressing for work at, or near moving machinery are no loose sleeves, no full skirts, no ties or frills to catch in moving parts. Both slacks and sleeves should be made without cuffs. Long sleeves rolled-up are to be shunned even more than cuffs; the loose roll thus caught in a machine is most resistent to tearing and a serious arm injury may result. Pockets are to be considered too, and no outside pocket at all, is the safest rule. If an outside pocket is necessary, the Bureau of Home Economics recommends a flat-seamed pocket, or flat hip-pocket.

On bench assembly work and other factory work without special hazards, either a simple, well-fitting, short-sleeved dress, or slacks and blouse are appropriate. Freedom of movement spells comfort and efficiency in any work. Pleated backs in blouses and well-cut garments contribute to that freedom.

A special dress for work is necessary too where there is dust or other soiling agents. Protecting the street clothes of men and women working with chlorinated napthalene in the manufacturing of insulated wires and electrical condensers was found essential to prevent cases of serious skin eruptions to young children and other members of workers families. Uniforms highly starched prevented the absorption of the poison. In case of any poisonous dusts, exposure time is doubled by carrying it around on street clothes.

With some materials skin contact is known to be a more important cause of poisoning than respiration or digestive contact. Street clothes must never be contaminated by such material.

For comfort of women who must work in cold places a ski-type of trousers has been devised of warm material fitted well about the ankles and topped by a close-fitting sweater.

Work gloves must be chosen for jobs on which they are to be used. They must be comfortable and durable as well as protective. Gloves are more than decorative necessities for women in industrial work. Protection to the fingers and hands can go a long way in cutting down the injuries to women. Hands and fingers are used in practically every occupations used to earn a living. Even a slight accident to a woman can disable her for work in a place where nimble fingers are required for the handling of small parts. According to some state reports, practically half of all the occupational injuried to women occur to hands and fingers. Gloves can furnish adequate protection in many cases.

Much assembly work requires handling sharp and rough objects. An ordinary, durable glove of inexpensive type means comfort and safety in this work. Where the parts handled are small, rubber finger-guards may be sufficient. Adhesive tape, so often seen around worker's fingers is a poor substitute. Its constant use has a harmful effect on the skin, and may even be the cause of definite irritation.

An operator handling sharp particles wears hand protectors of leather, such as goatskin, to protect her hands from minute chips. Rubber finger-guards are worn to make it easier to handle small parts. Gloves are also needed to handle tinplate.

Hands are most often affected by skin diseases caused by a great variety of substances used in industry. Gloves made of fabrics that absorb moisture may become so saturated with the harmful substance that they are worse than no gloves. The U.S. Bureau of Public Health has studied fabrics to find satisfactory protection against such harmful materials. And as a result they recommend, as the most suitable protection,against skin irritants, Pliofilm, Vinylite, and Koroseal. These materials prevent the irritants from coming in contact with the skin and they have the advantage of not being inflammable. They are easily washed with soap and water. And with ordinary care they will last for months in rough occupations. In gloves these materials have an elasticity like rubber, without the clammy feeling of rubber. They can be used where rubber would be attacked by the chemicals used, or where the worker is allergic to rubber itself. Rubber has other disadvantages aside from its uncomfortable feeling; it is heavy, tears easily, and may cause dermatitis in susceptible workers.

Protective sleeves, hoods, gloves, and aprons of this type may be worn. Sleeves should be snugly fitted over gloves so that hands and well as arms will be protected. Such protection is especially helpful where arms are lifted above shoulder level and may run down onto the forearm, or where material may be collected on the edge of the gloves and be rubbed on the wrist.

Gloves used in working should be considered carefully in the point of view of comfort. Leather gloves particularly should be checked for heavy rough seams or rough edges. Continual irritation of the skin opens the way for infections.

Gloves are used more than any other single item of protective clothing, but around moving machinery a glove is as taboo as a necklace or a finger ring. Serious accidents have been caused by wearing gloves while operating drills, punch-presses, lathes, and other machines. It is a temptation to wear gloves account of the frequent contact with oils and other greases. Substitute protections are available in creams and varnishes now on the market. No one cream or varnish is suitable protection for all substances, and the best methods is to use the special type of protection advised for each general group of irritants. In many cases pure lanolin, or a cream with a lanolin base is adequate. Examples of mixtures requiring special protection include chlorinated solvents, gasoline, chemical mixtures, turpentine, alcohol, turpentine and hydrosolvent mixtures. For such mixtures advice about the protection to use should be given by the plant physician.

An important consideration when a cream or varnish is used for protective covering is that it may be washed off with a suitable soap cleanser.

No jewelry is suitable for factory wear. The useful wrist watch, the frivolous earin necklaces, rings, and bracelets, though attractive in themselves, have no place in the factory. Some companies make definite rules no visible jewelry may be worn.

Jobs with special dangers require special kind of work clothing .

Safet clothing now provides protection against almost any hazard in any type of work. The worker dressed specifically for her job is safety conscious and less likely to have an accident. The following list indicates the personal equipment necessary in cases of exposure to the hazard listed with it -

Corosive substances, alkalies or acids -

Coat or apron of rubber. Rubber or chrome leather shoes with wooden soles, and in case of corrosives with sewed sole. Arm and leg protectors of glass fibre cloth, fiber metal alliy, or rubber. Gloves of rubber or rubberized cotton. Rubber hat or hood.

Hazard of cuts -

Chrome leather is advised for coat, apron, shoes, arm protectors and leg protectors and gloves. Metal mesh may be necessary in aprons, arm and leg guards. Gloves may be of metal mesh, canvas, or cotton. Head covering may be of plastic composition, duralumin, or vulcanized rubber.

Hazard of dermatitis -

Clothing of rubber. May necessitate coat or apron, shoes, arm protectors, and gloves.

Falling objects -

Shoes with reinforced toes. Arm and leg protectors with fiber metal alloy make. Head covering of plastic, duralumin, or vulcanized rubber.

Falls or slips -

Fall or slips -

Shoes with non-skid soles.

Flying particles -

Same as for punctures and blows with the exception that shoes with reinforced toes and metal mesh or cotton gloves are not necessary, and in some cases an asbestos coat or apron would be preferable to one of leather.

Whenever rubber is listed one of the substitutes formerly dicussed on page 31 may be used.

Punctures, blows, rough, sharp objects -

Chrome leather shoes with reinforced toes. Coat or apron with chrome leather or wire mesh. Leg and arm protectors of fibre metal alloy or leather. Gloves of chrome leather, metal mesh, or cotton. Necessary head covering of plastic, duralumin, or xulcanized fiber.

Hot liquids -

Apron or coat of chrome leather. Shoes opening at the side and made of same material. Leg and arm protection of fireproof duck. Asbestos or chrome leather gloves. Rubber hat or hood.

Hot materials -

Asbestos coat or apron. Wooden soled, chrome leather shoes without front lacing. Asbestos arm and leg protectors. gloves, and hood.

Moistures -

Rubber coat or apron. Chrome leather or rubber shoes. Same for arm protectors and leg protectors. Gloves of rubber or rubberized cotton. Hat or hood of rubber.

Spark explosion -

Shoes with sewed or wood-pegged soles; copper nailed heels.

Leg protectors include spats, leggings, pants, knee-pads.
Arm protectors include sleeve and wrist protectors.
Gloves include also mittens, hand pads, finger guards.
Hats include hoods.

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WHY INDUSTRIAL DISEASE CONTROL IS IMPORTANT TO WOMEN WORKERS

This article by the expert Margaret T. Mettert, an accepted authority on these matters throws considerable light upon the problem of using women more generally in industrial work .

Successful employment of women through the expanding period of production calls for all possible protection from the harmful substances,of gases, dusts, and fumes. The tremendous growth of new chemical processes in industry, increased turnover of employment, and rapid expansion of defense industries brings serious problems with keeping up with the growth of health hazards.

The problem of industrial diseases among women received attention, public-wide, about 1928 when the unfortunate New Jersey women clock dial and watch dial painters were found sentenced to death by radium poisoning. One result of the tragedy was the extablishment of precautions against exposure of workers in that industry. We have the opportunity now to control the industrial environment so that such tragedies need not occur. Constant alertness and planning can prevent increase in the annual loss of life and health from occupational diseases.

There is no question there is a sex variant in illness. The National Institute of Health study made in 1935 - 36 found that rates among women and men workers from 15 to 64 years of age that women experienced a higher illness rate in every group, the difference increasing with age. Whether the variation has a physiological basis or not, it indicates need for special protection for women.

The extent to which this sex variant applies to specifically industrial diseases is not known. But it is proved that women are more susceptible to industrial poisons than men; the best known being lead; and also that the reaction of women to even slight benzol exposure may be exceedingly severe, and is likely to take a different form from the reaction of men. Dr. Alice Hamilton states that evidence shows that younf women are particularly susceptible to poisons attacking the nervous system, such as carbon disulphide. We know too that pregnancy may aggravate and accelerate industrial poisoning.

Types of cases .

Reports of industrial illness and poisoning among women include, during the past 10 years, cases in the following list, which indicates the type of exposure women afce in industry -

1 - Skin infections caused by contact with several hundred different agents, including cleaning agents, dyes, miscellaneous chemicals, oils and greases, vegetables and fruits, rubber, plastics, metal, chlorinated napthalene.

2 - Synovitis and bursitis from repetitive activity.

3 - Lead poisoning.

4 - Volatile solvent poisoning, including benzol, carbon tetrachloride, and wood alcohol.

5 - Radium poisoning.

6 - Chrome ulcerations.

7 - Silicosis, asbestosis, and industrial tuberculosis.

8 - Zinc Poisoning.

9 - Carbon monoxide poisoning.

10 - Mercurial poisoning.

11 - Arsenic poisoning.

12 - Dinitrophenol poisoning.

In addition to these specifically industrial poisonings, cases such as the following were traced directly to occupational contacts - Tularemia (resturant cook), Tuberculosis (nurses), Heat prostration (cleaning and dyeing), contagious diseases (nurses and teachers).

Revealing studies .

Evaluating exposures that might result in disease, the Pennsylvania Division of Industrial Hygiene studied 16000 industrial plants and found over 4500 exposures of women to lead poisoning through lead or lead compounds, 7300 to non metallic inorganic dusts, and 228,000 to organic dusts. A similar study in Illinois by the Illinois Division of Industrial Hygiene included 50,000 women. Of every 100 women employed 59 were exposed to some harmful substance. Among the manufacturing districts the largest proportion of exposures of women per one hundred employed, were found in iron and steel, machinery and vehicles, (85 per 100) and chemical and allied industrial organizations (84 per 100)

Dr. Kronenberg, chief of the Illinois Division, points out that though women's work is light the exposures are still as great and as frequent, the duties highly repetitious, with factors of monotony, fatigue, and others, all of which are definite industrial health problems.

Occupational diseases are subtle. A woman may suffer from some industrial exposure for years before the effcts become obvious and actually prevent her employment. Frequently an employer uses a material labeled only with a trade name, the chemical properties unknown to the user.

The withdrawal of some chemicals for defense purposes will mean some substitution of other chemicals, some less known in their action on the human body, others known to be more hazardous. An illustration is the probable increase in the use of benzol, since the supply of toluol is needed in TNT manufacture. Toluol has been widely substituted for the more dangerous benzol in leather, rubber, and other industries.

Hazardous processes employing women are expanding rapidly. An example is dial painting with radioactive paints. In peacetime about 100 have jobs in this women's occupation in New York State; a center for such work. In the summer of 1941 about 2500 were so employed. These paints are used on aeronautical instruments and further expansion may be expected.

Substitutions possible .

The actions on the problems in the case of radium is indicative of what can be done to insure safe handling of industrial poisons. New York State authorities brought together in a committee persons concerned with radium poisoning to formulate a code for the use of this substance. The committe further planned methods of education for the employes as to necessary precautions.

Advance in another industry has been noted recently. Prohibition of harmful process materials, hazardous operations, and unsafe surroundings, but it seems pertinent in view of the fact that so much of the lost time and compensation due to occupational disease is causes by dermatoses, to give special attention to those parts of the body which are most frequently in contact with harmful substances, or are exposed in other more frequent ways to the hazards which lead to dermatoses.

The hands and arms of industrial workers are not only exposed to more hazards but, because of the extent to which they are soiled during work operations, the problem of cleaning them becomes one of importance, deserving the full attention of those concerned with plant sanitation. This is true for many reasons, not the least which is the danger of infections and danage caused by the use of unsuitable cleaning materials and mthods.

The basic problem .

First - What is the problem of cleaning arms and hands in the industrial plant ?

To make the issue clear let us dispense with at once the confusion which follows any attempt to lump together the hand and arm cleaning problem of the office or the home with that of the plant. Except for the comparatively rare occasions when the typist or stenographer gets her hands very dirty in changing a ribbon or adjusting a mimeograph machine, the dirt on the hands of office workers is not heavy or difficult to remove. In the home, except when Dad and once in a while Mom, investigates the interior mysteries of the car or vacuum cleaner, or perhaps undertakes a bit of painting, hands may seem dirty enough but are relatively easy to clean.

In the industrial plant however the dirt is not only more hetereogeneous, but including the almost invariable presence of grease and oil, but the dirt particles are always more deeply imbedded and therefore much more difficult to remove. Industrial dirts moreover, often tend to more irritating or harmful, besides they also harbor more bacteria and spores.

Of course there is a wide range in the degree of dirtiness depending on the type of work done. A lathe hand or a fleet garage mechanic gets very dirty hands and arms with a great deal of grease, and deeply imbedded metal and dirt particles. This condition applies to metal and machine workers generally and is complicated by the inevitable scratches, abrasions, and cuts which are the factors making difficult the cleaning and the incidence of infections. Nor should the fact be overlooked that callous points on hands and fingers, developed by the motions and contacts of the job, are particularly troublesome in that, cracks and abrasions tend to recur at the juncture between the callous skin and the normal surface.

Workers who assemble mechanisms have greasy, dirt-imbedded hands and arms to contend with, as well as those who produce the parts. Those who lazquer finish metalsor other materials have a hard hand-cleaning job to do, which is not solved by the use of solvents which are hard on the skin. In all these cases the tendency toward creating an over-sensitive skin must not be overlooked.

It is possible to examine the cleaning problems imposed by so many varieties of dirt and to plan the specifications of a safe hand and arm cleanser, which can not only meet the majority of conditions, but by suitable modifications and the provision of a moderate range of types, meet the inevitable condition of sensitive, and extra-sensitive skins. So let us take a look at the chemistry and mechanics of skin cleaning. Here is an extensive surface of the human skin (the arms and legs) hairless, and toughened chiefly on the palms of the hands, and relatively tender and covered with hair follicles everywhere else.

The dirt to be removed is never concentrated on the rough, palmar surface, but is liberally distributed over the entire area. Let's not worry about the nature of the dirt too much, except to remember it will usually be greasy or oily. And let us not overlook the presence of bacteria, spores, and fungi in most of these dirt deposits.

It is of course impractical and highly unsatisfactory to try and remove the greasiest mess by the use of plain water and extended scrubbing, although,in time, this might be accomplished. We must therefore use some kind of cleaning agent to clean skin surfaces, and naturally we turn to soaps of some kind and other safe removers allied with soaps.

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SELECTING THE RIGHT JOBS FOR WOMEN

The following excerpts are taken from 'Management Information'

Your first reaction in putting women on industrial jobs may be - it has never been done before and therefore cannot be done - before you assume that a woman cannot do a certain job, study that job carefully.

There are certain jobs women can do better than men. Other jobs they can do just as well. Some jobs they can do, though not as well as men. And there are some jobs women should never be asked to do.

Our experience in the forst World War and the experience of many industries in this country and Great Britian today, prove that women can do, practically, any job that men are doing; subject to their strength and physical inheritances.

There are, of course, a multitude of jobs on which women have normally worked in our industries. Woman are capable aof performing many more kinds, especially precision jobs, and many jobs we might not think of as women occupations.

Every supervisor should make a careful study of all the jobs under his direction in order that he may develop a plan in advance whereby his labor shortage may be met. Any change from men to women workers must be met in an orderly systematic manner. If possible women should be brought in, in pairs or small groups to take over certain operations rather than place individual women among men for a break-in. If you consider breaking down some of your skilled jobs in to sub-divided jobs the training problems will be simplified.

Some of the factors taken into consideration are -

Working conditions, the cleanliness of the job, strength required, the fatigue factors, work companions, Hazards of the job, working hours, How hard on the hands the job ~~is~~ may be, and the environment of the job.

Interest the key to results .

Women employes are like men, ni that they do their best work when they are interested. In fact unless there is interest in the job, results are disappointing. Output both as to quality and quantity depend upon interest. While interest is the key to results with women employes, just as with men, somewhat fifferent tactivs may have to be employed to keep their interest.

A woman's interest is likely to be more in the present than in the future of her job. Most women do not expect to work in industry all their lives. They regard their employment as a temporary status. It will be more difficult, therefore, to interest a woman in the 'long run' opportunities of her work. She wants what she wants today, from her job.

Women are more impressed in the everyday, tangible things about the job.

They are more concerned about their appearance. They are more affected by surface impressions.

A woman is interested in what she can earn on the job 'right now' - not what her earnings may be sometime in the future. She is more interested in maintaining a good reputation among her fellow workers than may be true of the men. She is interested in what she can get out of her job immediately, and is not so much interested in opportunities to do new and different kind of work. She is more likely to resist changes and transfers. She would like to get more money at the job on which she is working, but is not particularly interested in 'burning the midnight oil' to prepare for a better job.

Deserve respect .

Unless a woman can completely respect her supervisor she will find it difficult to maintain interest in her job. This is particularly true in the case of man supervising women employes. As a rule women will prefer to work under the supervision of aman rather than another woman. Women supervisors must be particularly careful to avoid getting 'chummy' with certain employes. Women are quicker than men to detect or imagine they see 'favoritism'.

Men supervisors of women must never forget to be gentlemen. They must be friendly without becoming familiar.

How to build interest .

Be ready to praise her for good results; and be ready to appreciate her efforts.

Appeal to her pride in accomplishment.

Do all you can to hekp her quickly improve her earning powerand maintain her earnings at a satisfactory level.

Maintain pleasant working conditions. Try to make it possible for her to maintain her personal appearance on the job.

Provide every possible facility to minimize her fatigue on the job. Carefully avoid partiality.

Maintain close enough contact so that you can immediately discourage and tendency to discouragement on the worker's part before it becomes deep seated.

Remove every possible hazard and try to team her up with congenial work companions.

How to train women for industrial jobs.

Women are different.

Wgen it comes to job safety there are certain characteristics of women that need to be considered.

Women are characteristically more afraid than men of getting hurt. But they are less conscious of the dangers that may lurk in the job.

They stick to habits they form more closely than men. They are more easily distracted by sudden noises, by conversations, and other things going on around them.

They are likely to become fatigued more easily than men are, and we know that fatigue often leads to accidents.

Think of these points when you are training women in safe working practices.

Special Precautions .

To begin with women's clothing unless properly adapted to industrial work may contribute to accident. See that they do not wear clothes with loose sleeves, loose belts and other parts that may get caught in the machinery.

Check their shoes. High-heeled shoes cause tripping, ankle-sprains, and excessive fatigue. Sell women on the right kind of work shoes; shoes that protect their toes.

If a woman has long hair advise her to keep it pinned back so it will not fall into moving parts of machines. Failure in this has resulted in many terrible accidents. The wearing of rings and bracelets may also be dangerous. Necklaces are also hazardous.

Avoid scare tactics .

In giving safety instructions to women be careful not to scare them or make them nervous about the work that they are to do. If you should say, ' You'll get hurt if you do this job like this', a woman's nervousness may actually cause her to get hurt. Better that you say, ' you can't get hurt if you do it the safe way'.

Take advantage of the fact that women stick closelt to habits and make safe habits the order of your instruction. An appeal to be careful is much more effective than a vivid description of the dangers present.

Instruction pointers .

Because women are less mechanically minded and usually less adapted to industrial operations, the supervisor must be all the more careful in his safety instructions. Take nothing for granted. Never assume that a woman will recognize the hazards of a job without careful instruction. There are just four basic steps in instruction -

First - put her at ease. Get her attention. Arouse her interest.

Second - Explain the safe working practices of the job slowly, clearly, completely, patiently, and one point at a time.

Third - Test her understanding of your instructions carefully by asking her questions beginning with, why, how, who, when, and where, and having her explain back to you the safety points involved in the job.

Fourth - Follow her up closely when she starts off on the job to make sure she is following your safety instructions.

The conscientuous supervisor will be particularly anxious to prevent accidents to women in industry.

Impressing organization policies .

Women are not as aware of standard procedures and their importance, nor of the importance of well-defined policies consistently administered as are men. More patient care therefore will have to be excercised in impressing organization policies upon women employes.

It is always important to make the reasons behind the company policies always clear to the employes. Usually though even more careful reasons should be given when explaining them to the women employes. A large percentage of women employes may have a very limited industrial background, and it may be difficult for them to appreciate the importance of certain policies. They may not realize the inconvenience engendered if regulations and policies are not observed.

Show them how policies apply to them .

Having shown to a woman employe how a company policy or regulation becomes nevessary, go a step further and show by illustration just how that policy or regulation apllies to her. If you illustrate in the foregoing manner you will find they are understood better. The women then know just how they affect the whole organization when disregarded.

Appeal to her self-interest .

You are not likely to find any women employe impressed with general principles involved in company policies. If you can show her how it will protect her own interests on the job she will be much more impressed. For example, a company employing women had a company policy that all employes were expected to give notification of expected absences from work, or were expected to give immediate notice to the supervisor of any unexpected absence. This company points out to each employe that this policy is an advantage to her, because absence of a work-partner will cut her earnings unless notification is given so another partnet can be arranged for. So all company policies should be so stated, so as to arouse self-interest as well as company interest on the part of the employe.

Test her understanding .

It is not enough to state a policy to the woman, but it also important that you be assured that she understands the importance of the policy. Have her explain it back to you in her own words, and also give you the reasons for it as she understands them; this will afford you more opportunity to elaborate and thus impress it on her understanding.

Too often policies and regulations are rattled off to employes or shived at them by a book of rules without going over them so they are understood; especially with a woman who has little conception of the swing and procedure of industry.

A little extra time and attention may save many misunderstandings, poor work, injuries, grief, and slowed production.

Giving job instruction .

Step 1 - The first step includes putting the learner at ease, finding out what she already knows, and getting her interested in learning the job. The first step is of great importance. All of her nervousness must be removed before her mind will receive new information and knowledge. Assure her that many other inexperienced workers have learned the job successfully, and that you know she can do so too. If possible draw some comparison between the work to be done and some job with which she may be familiar, possibly homework.

In addition to the usual interest rousing factors of the job you can add the fact that every worker in America is performing a partiotic service as well.

Step 2 - Your presentation and the new operation should be very carefully done. Tell her, show her, and explain points of the operation slowly, repeatedly, clearly, patiently, and one point at a time. Women posses curiosity to an unusual degree, therefore tell her 'why' at each step of the work. Encourage her to ask questions. Women are usually not mechanically minded therefore you must make every mechanical point very simple. When you are sure she understands, give her the third step.

Step 3 - Now try her out by having her perform the job. Check her here by asking why, how, when, and where. Questions like these reveal whether she really understands or not. Correct her errors patiently without being critical. Have her repeat the operation of the job several times.

Step 4 - After she has thoroughly demonstrated that she understands the job it is time to put her on her own. That is where she gets the chance to develop self-confidence. Check back frequently to see that she is following all right. This also gives her a chance to ask further questions that have arisen to puzzle her. Always be encouraging and gradually taper off the close supervision.

Tell the woman employe that you want her to be comfortable, that youbwant her to make suggestions on the job, that may relaive the hardships or discomfort of it, and make her feel you are friendly and have her interest at heart.

Special points to consider .

A survey of experience with women on industrial jobs shows that certain points need special consideration -

The supervisor himself must realize that a woman is a woman, even though she may be doing a man's work. She should be shown all the gentlemanly respect that we customarily show to women in every walk of life.

Women are particularly susceptible to any appearance of favoritism. They are much more likely to imagine favoritism than men, even when none exists. Their jealousies are easily aroused if certain women, more attractive, seem to make a 'play' for the boss. The supervisor's conduct must be above reproach at all times and strictly impartial.

It is important that the conduct of fellow men-employes be kept on a highly respectful basis. Supervisors should be particularly alert to detect any ungentlemanly conduct and should maintain effective discipline in this matter.

Women are not as interested, normally, as men employes in promotion. Most of them are not looking forward to a career in industry. Therefore they are interested in getting the most pay and satisfaction from the job they have.

Even justice to govern the payment of wages to women. They should be paid wages fairly fixed to the jobs they are to perform.

More absenteeism must be expected among women. Physical differences in women require special consideration. Many of them with home duties will absent themselves to take care of those duties, if ample time is not afforded them in their working schedule. Responsibilities in the home may necessitate more unexpected absences. A supervisor should anticipate this and be prepared to meet these conditions.

Most states have especial laws affecting the employment of women in industry. These laws relate to working hours, physical working conditions, safety precautions, rest periods, and lunch hours. Rvery supervisor should familiarize himself with these regulations.

Much misunderstanding, antagonism, and jealousy can be avoided, if it is made plain, particularly to men employes, that women are not being brought into industry to permanently displace men. Present war production emergencies require the hiring of women. Care should be excercised that no capable man is thrown out of a job at the present time to to the placement of women.

Ohio State Laws - Department Industrial Relations -,Bulletin #301 on - Female Labor - Compulsory Education - Child Labor - May 1, 1940. covers requirements and regulations governing the employing of women as to hours, wages, rest periods, comfort, sanitation,etc.

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ALPHABETICAL LISTING OF 508 WAR INDUSTRY PLANTS SCHEDULED BY WOMEN'S BUREAU DURING DEFENSE PERIOD PRIOR TO AND DURING WORLD WAR II

~~Pages 9, 10, 11 not typed for Dir. List~~
note of Wheeling Steel
Corp. to be added on
p. 11

6/51

ALPHABETICAL LIST OF 60 WAR INDUSTRY PLANTS SURVEYED BY THE WOMEN'S BUREAU DURING THE DEFENSE PERIOD PRIOR TO AND DURING WORLD WAR II

NAME OF PLANT	LOCATION	DATE OF SURVEY
Aero Manufacturing Company	Wichita, Kansas	12/41, 1/43
Ainsworth, Wm. & Sons	Denver, Colorado	5/43
Aircraft Accessories	Kansas City Kan.	4/43, 10/43 missing & 4/44
Aircraft Mechanics	Colorado Springs, Colo.	5/43
Aircraft Welders	Wichita, Kansas	1/43
Aircraft Woodworkers, Inc.	Hutchinson, Kansas	2/43
Air Depot -		
15th sub depot - A.A.F.-Bolling Field	Washington, D. C.	5/43
319" sub depot - Westover Field	Chicopee Falls, Mass.	4/43
369" " " - A.A.F. Base	Pueblo, Colo.	6/43
Ai-Research Manufacturing Co.	Phoenix, Arizona	2/45
Alabama Dry-Dock & Shipbuilding	Mobile, Ala.	2/43
Alabama Metal Lathe Company	Birmingham, Ala.	12/43 missing
Alabama Ordnance	Childersburg, Ala.	4/41, 2/42, 12/43
Allegheny - Ludlum Corp.	Buffalo, N. Y.	9/43
Allen Manufacturing Co.	Hartford, Conn.	6/43
Allis - Chalmers I	Milwaukee, Wisconsin	3/43
Allis-Chalmers II	" "	3/43
Allison Div.-G.M.C.	Indianapolis, Ind.	2/43
Aluminum Co. of America	New Kensington, Pa.	10/40
" " " "	Phoenix, Arizona	1/45
" " " "	Vernon, California	3/45
American Bosch	Springfield, Mass.	10/40
" Brass Company	Waterbury, Conn.	10/40
" Can Company	Tampa, Florida	7/43
" Chain & Cable Company	Reading, Pa.	12/43
" " " " "	York, Pa.	11/43
" Container Corp.	Fort Worth, Texas	3/44
" Instrument Company	Silver Spring, Md.	5/43
" Manufacturing Co.	Fort Worth, Texas	3/44
" Seating Company	Grand Rapids, Michigan	9/42
" Steel Foundries	E. Chicago, Ill.	10/43
" " "	Granite City, Ill.	8/43
" " "	Hammond, Ind.	10/43
American Steel and Wire Co.	Donora, Pa.	9/43
American Sugar Refining Co.	Baltimore, Md.	8/44
Angelica Jacket Co.	St. Louis, Mo.	8/43, 10/43
Anniston Ordnance	Anniston, Ala.	3/43
Arco Tool Co.	Santa Monica, Calif.	3/42 missing
Arkansas Ordnance	Jacksonville, Ark.	4/42
Associated Shipbuilders	Seattle, Washington	8/41, missing 7/43
Atlas Powder Company	Wilmington, Del.	4/41

NAME OF PLANT	LOCATION	DATE OF SURVEY
Barber-Coleman Company	Rockford, Ill.	9/42
Barbour Boat Works	New Bern, N. C.	3/43
Barnes Drill Company	Rockford, Ill.	9/42
" , W.F. & John, Mch. Tool Co.	" "	9/42
Bath Iron Works	Bath, Me.	4/43
Bausch & Lomb Co.	Rochester, N. Y.	10/41
Bay Manufacturing Co.	Bay City, Mich.	5/43
Bechtel-McCone-Parsons Co.	Birmingham, Ala.	11/43
Beech Aircraft Corp.	Wichita, Kan.	12/41, 2/43
Bell Aircraft Corp.	Buffalo, N. Y.	1/42, 8/43
" " "	Marietta, Ga.	11/43
" " "	Niagara Falls, N. Y.	1/42, 8/43
Bell and Howell Co.	Chicago, Ill.	9/41
Bellevue Magazine	Washington, D. C.	5/43
Belmont Radio Corp.	Chicago, Ill.	1/43
Bendix Aviation Corp.	Bendix, N. Y.	8/40, 7/41, 7/42
" " "	Chicago, Ill.	5/44
" " "	Philadelphia, Pa.	5/41,7/41,9/41,7/42 missing
Bendix Marine Instrument Div.	Brooklyn, N. Y.	10/41
Bendix Products (Div. of Bendix Aviation Corp.)	South Bend, Indiana	1/43
Bethlehem Steel Co.	Bethlehem, Pa.	10/43
" " "	L~~o~~ackawanna, N. Y.	9/43
" " "	Sparrows Point, Md.	9/43
" " "	West Seattle, Wash.	9/43
" -Fairfield Shipyard	Baltimore, Md.	4/43
" -Fore River Shipyard	Quincy, Mass.	3/43
" -Hingham Shipyard	Hingham, Mass.	3/43
" -Key Highway Shipyard	Baltimore, Md.	4/43
Birdsboro Steel Foundry & Machine Co.	Birdsboro, Pa.	12/43
Birmingham Paper Co.	Birmingham, Ala.	11/43
Blatz Brewing Co.	Milwaukee, Wisc.	3/43 missing
Boeing Aircraft Co.	Seattle, Wash.	9/42, 1/43
" " "	Wichita, Kansas	12/41, 2/43, 4/44
Boston Navy Yard	Charlestown, Mass.	2/43
Bowen & Company	Bethesda, Md.	5/43
Brewster Aeronautical Corp.	Johnsville, Pa.	9/41, 4/42
Brewster Co.	Long Island, N. Y.	8/40
Bridgeport Brass Co.	Birdgeport, Conn.	10/43
Briggs Indiana Corp.	Evansville, Ind.	2/43
Briggs - Stratton Corp.	Milwaukee, Wisc.	3/43
Brown Co.	Berlin, N. H.	4/44
Brown & Sharp Mfg. Co.	Providence, R. I.	10/40, 7/42
Brunswick Marine Const. Co. - So. Yd.	Brunswick, Ga.	1/43
Budd, Edwin G. Mfg. Co.	Philadelphia, Pa.	10/41, 4/42
Buffalo Arms Corp.	Buffalo, N. Y.	10/43
Buffalo Sintering Co.	" "	9/43
Buick Motor Div. - G. M. C.	Chicago, Ill.	12/42, 5/44
Bullard Co.	Bridgeport, Conn.	10/40
Byer, A.M., Co.	Ambridge, Pa.	9/43

NAME OF PLANT	LOCATION	DATE OF SURVEY
California Shipbuilding	Terminal Island, Calif.	3/42
Carnegie-Illinois Steel-Duquesne Wks.	Duquesne Pa.	9/43
" " " -Gary Wks.	Gary, Ind.	8/43
" " " -Homestead Mills	Pittsburg, Pa. ✓	9/43
" " " -South Works	Chicago, Ill.	9/43
" " " -Youngstown Works	Youngstown, Ohio	10/43
Carter Carburetor Corp.	St. Louis, Mo.	1/42
Castle Dome Copper Co.	Miami, Arizona	2/45
Century Electric Co.	St. Louis, Mo.	1/42
Century Engineering Corp.	Cedar Rapids, Iowa	11/43
Cessna Aircraft Corp.	Hutchinson, Kansas	2/43
" " "	Wichita, Kansas	12/41, 1/43
Champion-International Co.	Lawrence, Mass.	8/44
Charleston Navy Yard	Charleston, S. C.	1/43, 5/43
" Ordnance Depot	No. Charleston, S. C.	5/43
" Shipbuilding & Dry Dock	Charleston, S. C.	5/43
Cherry-Burrell Corp.	Cedar Rapids, Iowa	11/43
Chevrolet Div. - G.M.C. Motor & Axle	Buffalo, N. Y.	9/43
" " - " Plant 1	" "	9/43
" " - " Plant 2	" "	9/43
Chicago and Northwestern R. R.	Chicago, Ill.	7/43
Chickasaw Ordnance	Memphis, Tenn.	2/42
Chrysler Evansville Ordnance	Evansville, Ind.	2/43
Cincinnati Milling Mch. Co.	Cincinnati, Ohio	8/42
Claremont Paper Co.	Claremont, N. H.	4/44
Clearfield Naval Supply Depot	Clearfield, Utah	3/43, 5/43
Cleveland Automatic Machine Co.	Cleveland, Ohio	8/42
Coleman Lamp & Stone Co.	Wichita, Kansas	2/43, 4/44
Collins Radio Corp.	Cedar Rapids, Ia.	11/43
Colorado Fuel & Iron Co.	Pueblo, Colo.	6/43
" Tent & Awning Co.	Denver, Colo.	5/43
Columbia River Paper Mills	Vancouver, Washington	6/44
Colt Patent Firearms	Hartford, Conn.	10/40, 7/42
Commercial Iron Works	Portland, Oregon	1/43
Commonwealth Aircraft, Inc.	Kansas City, Mo.	9/43, 2/44
Connors Steel Co.	Birmingham, Ala.	12/43
Consolidated Aircraft Co.	Fort Worth, Texas	12/41, 12/42
" " "	San Diego, Calif.	4/41, 1/42, 10/42
" Shipbuilding	Wilmington, Calif.	3/42
" -Vultee Aircraft	Fort Worth, Texas	3/44
" - " "	San Diego, Calif.	10/43
Continental Air Lines - Mod. Center	Denver, Colo.	5/43
" Roll & Steel Co.	E. Chicago, Ill.	10/43
Coosa River Ordnance	Talledega, Ala.	3/42
Cornhusker Ordnance Plant	Grand Island, Nebraska	6/43
Cramp Shipbuilding Co.	Phila., Pa.	3/43
Crane Co.	Chicago, Ill.	1/43
Cracker-Burbank Co.	Fitchburg, Mass.	9/44
Crown-Williamette	Camas, Wash.	7/44

✓ Data on 12 Carnegie-Ill steel plants (in addition to the 5 visited) were obtained and used in Steel report, by E.E.

NAME OF PLANT	LOCATION	DATE OF SURVEY
Crucible Steel Co. of America	Harrison, N. J	8/40
Culver Aircraft	Wichita, Kansas	2/43
Curtiss-Wright-Corp.-Plant I	Buffalo, N. Y.	5/41, 1/42, 8/43
" " " " II	" "	1/42, 8/43
" " "	Columbus, Ohio	3/42
" " "	St. Louis, Mo.	2/42, 6/43, 3/44
" " " -Prop. Div.	Clifton, N. J.	8/40, 7/42
" " " - " "	Indianapolis, Indiana	2/43
Cushman Chuck	Hartford, Conn.	6/43
Cutler-Hammer, Inc.	Milwaukee, Wisconsin	3/43
Dafoe Shipbuilding Co.	Bay City, Michigan	4/43
Deerfield Glassine Co.	Monroe Bridge, Mass.	8/44
Denver Medical Depot	Denver, Colorado	5/43
" Ordnance	" "	12/41, 2/43, 5/43
" & Rio Grand Western R. R.	" "	5/43.
" " " " " "	Pueblo, Colorado	5/43
" " " " " "	Salt Lake City, Utah	5/43
DeVilbiss Company	Toledo, Ohio	4/42
Dodge Div. of Chrysler Corp.	Chicago, Ill.	1/42, 6/42
" Mfg. Co.	Mishawaka, Indiana	1/43
Doehler Die Casting Co.	Pottstown, Pa.	12/43
Douglas Aircraft Co.	Long Beach, Calif.	1/42
" " "	Oklahoma City, Okla.	4/43
" " "	Santa Monica, Calif.	1/42, 2/42
" " "	Tulsa, Okla.	12/41, 3/43, 2/44
Dunlop Tire & Rubber Corp.	Buffalo, N. Y.	9/43
Dupont Co.	Wilmington, Del.	4/41
Dura Div. of Detroit Harvester	Toledo, Ohio	4/42
E. F. G. Engineering Works, Inc.	Pueblo, Colo.	5/43
East Coast Naval Ordnance	Burns City, Ind.	1/42
Eastman Kodak Co.	Rochester, N. Y.	10/41
Edgewood Arsenal	Edgewood, Md.	11/41
Edison, Thomas A.	W. Orange, N. J.	8/40, 6/42
Eital McCullough, Inc.	Salt Lake City, Utah	5/43
Electric Boat Co.	Groton, Conn.	3/43
Elizabeth City Shipyards	Elizabeth City, N. C.	3/43
El Paso Associates	Colorado Springs, Colo.	5/43
Elwood Ordnance	Elwood, Ill.	1/42, 1/45
Emerson Electric Mfg. Co.	St. Louis, Mo.	2/42, 7/43
Engineering Research Corp.	Riverdale, Md.	5/43
Esleeck Mfg. Co.	Turners Falls, Mass.	8/44
Everett Pulp & Paper Co.	Everett, Wash.	9/44
Fairchild Aviation Corp.	Burlington, N. C.	7/43
" " "	Hagerstown, Md.	9/41
" " "	Long Island, N. Y.	8/40

NAME OF PLANT	LOCATION	DATE OF SURVEY
Falge Engineering Service	Bethesda, Md.	5/43
Fellows Gear Shoper Co.	Springfield, Vt.	7/42, 5/43
Feltex Corp.	Rock Island, Ill.	2/42
Fibreboard Products, Inc.	Port-Angeles, Wash.	9/44
Firestone Tire & Rubber Co.	Memphis, Tenn.	8/43
Fisher, Chas., Spring Co.	Brooklyn, N. Y.	8/40
Fisher, Memphis Airc. Div. G.M.C.	Memphis, Tenn.	2/42
Fleetwing, Inc.	Bristol, Pa.	4/42
Follansbee Steel Corp.	Follansbee, W. Va.	9/43
Foote Bros. Gear Mch. Corp.	Chicago, Ill.	1/43, 4/44
Ford Motor Co.	Edgewater, N. J.	7/43
Foster Bed Mfg. Co.	St. Louis, Mo.	11/43
Frankford Arsenal	Phila., Pa.	5/41, 10/41, 4/42
Franklin Sugar Company	" "	11/43
Full Knit Hosiery Co.	Burlington, N. C.	7/43
G. & H. Tool Co.	Wichita, Kansas	2/43
Gates Rubber Co.	Denver, Colo.	5/43
General Cable Corp.	St. Louis, Mo.	8/44
General Electric Co.	Bridgeport, Conn.	10/40
General Electric X-ray	Chicago, Ill.	1/43
" Iron Works	Denver, Colo.	5/43
" Mills	Kansas City, Mo.	5/43
" "	Oklahoma City, Okla.	5/43
" Motor Corp., A.C. Spark Plug	Flint, Michigan	8/42
" " " - Frigidaire	Dayton, Ohio	5/42
" Steel Castings Corp.	Granite City, Ill.	8/43
Gilbert, A. C., Co.	New Haven, Conn.	11/42
Goodyear Aircraft Corp.	Akron, Ohio	3/42
" Rubber Co.	" "	11/40
Graniteville Co., Sibley Div.	Augusta, Ga.	10/43
Great Northern Paper Co.	E. Millinocket, Me.	8/44
Greenbaum Tanning Co.	Milwaukee, Wisconsin	4/43
Gulf Shipbuilding Co.	Chickasaw, Ala.	2/43
Harvey Machine Co.	Long Beach, Calif.	2/42
Haskelete Corp.	Grand Rapids, Michigan	9/42
Haslom, F., Co.	Brooklyn, N. Y.	10/41
Hayes Mfg. Co.	Grand Rapids, Michigan	9/42
Heckethorn Mfg. & Supply Co.	Littleton, Colo.	5/43
Hendy, Joshua Iron Works	Sunnyvale, Calif.	12/42
Hercules Powder Co.	Dublin, Va.	11/41, 11/43
Hollingsworth-Whitney Paper Co.	Waterville, Me.	8/44
Hoosier Lamp & Stamp Co.	Evansville, Ind.	2/43
Hoosier Ordnance	Charlestown, Ind.	12/41
Houde Eng. Div.- Houdaille Hershey	Buffalo, N. Y.	10/43
Hudson Silk Hosiery	Charlotte, N. C.	8/43
Huntsville Arsenal	Huntsville, Ala.	3/42
Hurley Machine Div. of Utilities Corp. Elec. Household	Cicero, Ill.	12/42

NAME OF PLANT	LOCATION	DATE OF SURVEY
Illinois Central R. R.	Chicago, Ill.	7/43
" Ordnance	Carbondale, Ill.	1/42
Imperial Furniture	Grand Rapids, Michigan	9/42
Indiana Ordnance	Charlestown, Ind.	4/41, 12/41
Ingalls Shipbuilding Corp.	Pascagoula, Miss.	2/43
Inland Steel	Indian Harbor, Ind.	9/43
Inspiration Consolidated Copper Co.	Inspiration, Ariz.	2/45
~~International Harvester Co.~~	~~Chicago, Ill.~~	~~9/42~~
" " "	Milwaukee, Wisc.	3/43
" " "	St. Paul, Minn.	9/42
International Smelting & Refining Co.	Miami, Ariz.	2/45
Iowa Ordnance	Burlington, Iowa	2/42, 4/42, 3/44, 3/4
Jacobs Aircraft Engine Co. - Plant 1	Pottstown, Pa.	8/41, 8/43
" " " " - Plant 2	" "	8/43
Jones & Lamson Machine Co.	Springfield, Vt.	7/42, 5/43
Jones & Laughlin Steel Corp.	Aliquippa, Pa.	9/43
" " Laughlin Steel Corp.	Pittsburgh, Pa.	9/43
Kaiser (3 yards)	Portland, Oregon (Area)	6/44
Kollsman Instrument Co.	Elmhurst, N. Y.	10/41 missing
Kankakee Ordnance	Elwood, Ill.	4/41, 1/42, 1/45
Kansas Mills (General Mills)	Wichita, Kansas	5/43
Kansas Ordnance	Parsons, Kansas	11/42
Keith Paper Co.	Turners Falls, Mass.	8/44
Kellett Autogiro Corp.	Phila. Pa.	12/41. 4/42
Kennebec Pulp & Paper Co.	Augusta, Me.	5/44
Kingsbury Machine Tool Co.	Keene, N. H.	6/42
" Ordnance	Kingsbury, Ind.	12/41, 5/42, 10/42
LaFollette Shirt Company	LaFollette, Tenn.	10/43
Lake City Ordnance	Lake City, Mo.	12/41, 1/42, 9/43
Landis Machine Co.	St. Louis, Mo.	1/42
" " "	Waynesboro, Pa.	11/43
" Tool Co.	" "	11/43
Lapointe Tool Co.	Hudson, Mass.	7/42
Larkwood Hosiery Mill	Charlotte, N. C.	8/43
Lawley, George & Son, Co.	Neponset, Mass.	3/43
LeBlond Machine Tool Co.	Cincinnati, Ohio	8/42
Leonard, Robert S., Co.	Kansas City, Mo.	11/43
Letterkenny Ordnance Depot	Chambersburg, Pa.	7/43
Link Belt Ordnance	Chicago, Ill.	12/42
Lionel Mfg. Co.	Newark, N. J.	8/40, 7/42
Lockheed-Vega Aircraft Co.	Burbank, Calif.	1/42, 3/42
Lone Star Ordnance	Texarkana, Texas	4/42, 3/44
Long Bell Lumber Co.	Longview, Wash.	7/44
Longview Fibre Co.	" "	7/44

NAME OF PLANT	LOCATION	DATE OF SURVEY
Lordstown Ordnance	Lordstown, Ohio	8/43
Los Angeles Shipbuilding	San Pedro, California	3/42
Louisiana Ordnance	Minden, La.	3/42
Lowry Field - sub depot	Denver, Colorado	5/43
Lukas, Harold	Indianapolis, Ind.	2/43
Lycoming Div. of Aviation Corp.	Williamsport, Pa.	8/43
Mallory, P. R.	Indianapolis, Ind.	2/43
Manteo Boat Works	Manteo, N. C.	3/43
Mare Island Navy Yard	Mare Island, Calif.	3/42, 4/43
Martin, Glenn L.	Baltimore, Md.	9/41
Maryland Dry Dock Co.	Fairfield, Md.	4/43
Mathis, John H. Co.	Camden, N. J.	5/42, 1/43
May McEwen Kaiser Co.	Burlington, N. C.	7/43
McCahan, W. J., Sugar & Molasses Refining Co.	Phila., Pa.	11/43
McCloskey Shipbuilding Co.	Tampa, Fla.	7/43
McDonnell Aircraft	St. Louis, Mo.	2/42, 7/43, 9/43
McQuay Norris Mfg. Co. (St. L. Ordn.) (Located at)	St. Louis, Mo.	1/42,2/42,5/43,6/4 10/43
Metzger, John W. Co.	Denver, Colo.	5/43
Miami Copper Co.	Miami, Arizona	2/45
Midwest Carbide Co.	Keokuk, Iowa	9/43
Millers Falls Paper Co.	Millers Falls, Mass.	8/44
Milwaukee, Ordnance	Milwaukee, Wisconsin	3/43
Minneapolis-Honeywell Regulator Co.	Minneapolis, Minn.	8/41
Mississippi Ordnance	Flora, Miss.	3/42
Mississippi Valley Structural Steel	St. Louis, Mo.	10/43
Missouri Boiler & Sheet Iron Works	" " "	7/43
Missouri Valley Bridge & Iron Co.	Evansville, Ind.	2/43
Mobile Air Repair Depot	Mobile, Ala.	3/43
Molybdenum Mine	Climax, Colo.	5/43
Monarch Machine Tool Co.	Sidney, Ohio	8/42
Monsanto Chemical Co.	St. Louis, Mo.	6/43
Moore Dry Dock Co.	Oakland, Calif.	4/44
Morley Co.	Portsmouth, N. H.	4/44
Muellers Furniture Co.	Grand Rapids, Michigan	9/42
Muten Co.	Chicago, Ill.	9/44
National Electric Machine Shops	Washington, D. C.	5/43
" Fireworks, Inc.	Cordova, Tenn.	2/42
" " "	Elkton, Md.	11/41, 6/43 missing
" Malleable Steel Castings	Cicero, Ill.	10/43
" Mfg. Co.	Kansas City, Mo.	11/43
" Munitions Corp.	Carrboro, N. C.	7/43
" Paper Products Company	Port Townsend, Wash.	9/44

NAME OF PLANT	LOCATION	DATE OF SURVEY
National Tube Co.	McKessport, Pa.	9/43
Naval Aircraft Factory	Phila., Pa.	10/41,12/41,4/42
" Fuze Loading Plant	Macon, Ga.	3/42
" Torpedo Station	Alexandria, Va.	5/43
" " "	Keyport, Wash.	8/43
Nebel Knitting Mill	Charlotte, N. C.	8/43
New England Shipbuilding Corp.	S. Portland, Me.	4/43, 6/44
Newport News Shipbuilding & Dry Dock	Newport News, Va.	3/43
New York Navy Yard	Brooklyn, N. Y.	6/43
" " Shipbuilding Corp.	Camden, N. Jersey	7/43
Norfolk Navy Yard	Portsmouth, Va.	3/43
Norris, W. C., Mfg. Co.	Tulsa, Okla.	3/43
North American Aviation Co.	Dallas, Texas	3/44
" " " "	Inglewood, Calif.	12/41, 1/44
" " " "	Kansas City, Kan.	12/41,12/43,2/44 4/44
" Carolina Shipbuilding Co.	Wilmington, N. C.	2/43
Northrup Aircraft, Inc.	Hawthorne, Calif.	2/42
Norton Co.	Worcester, Mass.	6/42, 2/43
Ogden Air Depot	Ogden, Utah	3/42, 4/43
" Arsenal	" "	4/43
" Ordnance	" "	3/42
Oklahoma City Air Depot-Tinker Field	Oklahoma City, Okla.	4/43,3/44, 12/44
" Ordnance	Pryor, Okla.	3/43
Oliver Farm Equipment - Plant 1	So. Bend, Indiana	1/43
" " " - Plant 2	" " "	1/43
Otis Elevator Co.	Buffalo, N. Y.	9/43
Owens Yacht Co.	Dundalk, Md.	4/43
Palmer Scott Co.	New Bedford, Mass.	3/43
Parker Young Co.	Lincoln, N. H.	7/44
Pejepscot Paper Co.	Brunswick, Me.	5/44
Peninsula Plywood Corp.	Everett, Wash.	9/44
Pennsylvania R. R.	Chicago, Ill.	7/43
" Sugar Co.	Phila., Pa.	11/43
Philadelphia Signal Corps Depot	" "	4/42
Picatinny Arsenal	Dover, N. J.	4/41, 4/42
Piper Aircraft Corp.	Lockhaven, Pa.	4/42
Plum Brook Ordnance	Sandusky, Ohio	10/42
Pollack Mfg. Co.	Arlington, N. J.	9/40, 6/42
Pratt & Whitney - Div. United Aircraft	E. Hartford, Conn.	11/42, 6/43
" " "	Hartford, Conn.	10/40, 11/42
" " " -Aircraft Corp. of Mo.	Kansas City, Mo.	
Pressed Steel Car Co.	Chicago, Ill.	10/43, 9/44
Pueblo Ordnance Depot	Pueblo, Colo.	6/43
Puget Sound Navy Yard	Bremerton, Wash.	8/41, 7/43
Pullman Standard Car Mfg. Co.	Chicago, Ill.	12/42

NAME OF PLANT	LOCATION	DATE OF SURVEY
Quaker Oats Co.	Cedar Rapids, Iowa	11/43
Quality Hardware & Machine Corp.	Chicago, Ill.	1/43
Quartermaster Depot	Fort Worth, Texas	12/42; 3/44
" "	Jeffersonville, Ind.	12/41
" "	Ogden, Utah	4/43
" "	Savannah, Ga.	5/43
R. C. A. Radio Corp.	Indianapolis, Ind.	2/43
Radford Ordnance	Radford, Va.	4/41; 11/41;4/42
Ramsey Accessories Mfg. Co.	St. Louis, Mo.	7/43
Ranger Aviation	Farmingdale, N. Y.	8/40
Rauland Corp.	Chicago, Ill.	8/44
Ravenna Ordnance	Ravenna, Ohio	2/41; 4/42
Rayonier, Inc.	Hoquiam, Wash.	7/44
" "	Port Angeles, Wash.	9/44
Read Machinery Co.	York, Pa.	11/43
Real Silk Hosiery, Inc.	Indianapolis, Ind.	2/43
Red River Ordnance	Texarkana, Texas	4/42; 3/44
Redstone Ordnance	Huntsville, Ala.	3/42
Reed-Prentice Corp.	Worcester, Mass.	6/42
Remington Arms	Bridgeport, Conn.	10/40
Republic Aviation	Evansville, Ind.	2/43
" "	Farmingdale, N. Y.	8/40
" Steel Corp.	Buffalo, N. Y.	9/43
" " "	E. or S. Chicago, Ill.	8/43
" " "	Youngstown, Ohio	10/43
" Tool & Drill Co.	Chicago, Ill.	9/42; 1/43
Rheem Mfg. Co.	Birmingham, Ala.	11/43
Ritter Dental Co.	Rochester, N. Y.	10/41
Rochester Products Co.	" "	10/41
Rock Island Arsenal	Rock Island, Ill.	2/42; 9/42
Rockola Mfg. Co.	Chicago, Ill.	1/43
Rohr Aircraft Corp.	Chula Vista, Calif.	1/42; 9/43
Royal Typewriter Co.	Hartford, Conn.	6/43
Ruberoid Co.	St. Louis, Mo.	5/45
Russell Electric Co.	Chicago, Ill.	12/44
Ryan Aernautical Co.	San Diego, Calif.	1/42; 9/43
Sacremento Air Service Command- McClellan Field	Sacramento, Calif.	3/42; 3/44
Savage Arms Corp.	Utica, N. Y.	8/42
Savanna Ordnance Depot	Savanna, Ill.	2/42; 10/43
Savannah Machine & Foundry Co.	Savannah, Ga.	4/43
" Sugar Refining Corp.	Port Wentworth, Ga.	5/43
Schaeffer Tent & Awning Co.	Denver, Colo.	5/43
Schlitz, Jos., Brewing Co.	Milwaukee, Wisc.	3/43

NAME OF PLANT	LOCATION	DATE OF SURVEY
Scoville Mfg. Co.	Waterbury, Conn.	10/40; 3/41
Seaboard Paper Co.	Bucksport, Me.	8/44 missing
Sealright Company, Inc.	Kansas City, Kan.	8/41; 7/43
Seattle-Tacoma Shipbuilding Corp.	Tacoma, Wash.	11/43
Servel, Inc.	Evansville, Ind.	2/43
Shwayder Bros., Inc.	Denver, Colo.	5/43
Singer Sewing Machine Co.	Elizabethport, N. J.	8/40; 7/42
Sioux Ordnance Depot	Sidney, Nebraska	6/43
Sklar, S. Mfg. Co.	Long Island, N. Y.	10/41
Smith, A. O.	Milwaukee, Wisc.	3/43
" & Davis Mfg. Co.	St. Louis, Mo.	8/43¢ 10/43; 6/44
Solar Aircraft Corp.	San Diego, Calif.	1/42; 9/43
Soundview Pulp Co.	Everett, Wash.	9/44
South Box & Lumber Co.	Wilmington, N. C.	2/43
Southeastern Shipbuilding Co.	Savannah, Ga.	4/43
" Shirt Co.	LaFollette, Tenn.	10/43
Southern Pacific R. R.	Ogden, Utah	4/43
" " "	San Francisco, Calif.	5/44
Spartan Aircraft	Tulsa, Okla.	12/41; 3/43
Sperry Gyro-scope	Brooklyn, N. Y.	8/40; 10/41
Spicer Mfg. Co.	Pottstown, Pa.	12/43
" " "	Toledo, Ohio	4/42
Springfield Armory	Springfield, Mass.	7/42
Standard Parachute Corp.	San Diego, Calif.	1/42; 9/43
Standard Transformer Corp.	Chicago, Ill.	9/44
Steel Product Co.	Savannah, Ga.	4/43
St. Louis Ordnance (U.S. Cartridge)	St. Louis, Mo.	1/42; 2/42; 5/43; 6/43; 10/43; 3/44
St. Louis Steel Corp.	St. Louis, Mo.	2/42
Stockham Pipe Fittings Co.	Birmingham, Ala.	11/43
Studebaker Aviation, Inc.	Chicago, Ill.	12/42; 4/44
" " "	South Bend, Ind.	1/43
Sun Shipbuilding & Dry Dock Co.	Chester, Pa.	7/43
Tampa Shipbuilding Co.	Tampa, Fla.	7/43
Taylor Instrument Co.	Rochester, N. Y.	10/41
Teletype Corp.	Chicago, Ill.	1/43
Terre Haute Ordnance Depot	Terre Houte, Ind.	8/43
Textile Machine Works	Reading, Pa.	12/43
Thomas Car Works	High Point, N. C.	7/43
Thompson Aircraft Products	Euclid, Ohio	3/42
Tidewater Associated Oil Co.	Avon, Calif.	4/43; 7/43
Todd-Erie Basin Dry Dock, Inc.	Brooklyn, N. Y.	7/43
Todd Shipbuilding Corp.	Hoboken, N. Y.	7/43
Tooele Ordnance Depot	Tooele, Utah	3/43
Transcontinental & Western Airlines	Kansas City, Mo.	10/43
" " " (Nat'l? Airport)	Washington, D. C.	5/43
Trico Products	Buffalo, N. Y.	9/43

NAME OF PLANT	LOCATION	DATE OF SURVEY
Triumph Explosives	Elkton, Md.	11/41; 6/43
Twin City Arsenal	New Brighton, Minn.	8/41; 11/42
Union Bag & Paper Corp.	Savahhan, Ga.	5/43
Union Pacific R. R.	Ogden, Utah	4/43
" " "	Salt Lake City, Utah	4/43
United Aircraft Corp.	E. Hartford, Conn.	10/40
" States Naval Air Station	Alameda, Calif.	3/42
" " " " Repair Station	No. Island, Calif. (San Diego)	1/42; 12/43
" " " Ordnance (Amertorp)	St. Louis, Mo.	6/43
" " Navy Yard	Portsmouth, N. H.	3/43
" " Rubber Co.	Charlotte, N. C.	8/43
" " " "	Mishawaka, Ind.	1/43
" " " "	Naugatuck, Conn.	4/43
Universal Match Co.	St. Louis, Mo.	8/43-Utah Ordnance
Utah Ordnance	Salt Lake City, Utah	3/42; 5/43
Victory Ordnance	Peoria, Ill.	3/45
Vought-Sikorsky	Stratford, Conn.	4/41
Vultee Aircraft Inc.	Downey, Calif.	1/42
" " "	Nashville, Tennessee	3/42
Wagner Electric Co.	St. Louis, Mo.	7/43
Walsh Kaiser Co. Shipbuilding	Providence, R. I.	3/43; 7/43
Warner-Swazey Co.	Cleveland, Ohio	8/42
Warren, S. D., Co.	Cumberland, Md.	5/44
Washington Navy Yard	Washington, D. C.	5/43
" Pulp & Paper Corp.	Port Angeles, Wash.	9/44
Waterbury Clock Co.	Waterbury, Conn.	11/42
Watertown Arsenal	Watertown, Mass.	6/42
Waterliet Arsenal	Waterliet, N. Y.	8/42
Weirton Steel Co.	Weirton, W. Va.	9/43
Western Cartridge	Easton Alton, Ill.	1/42; 12/42
Western Electric	Cicero, Ill.	1/43
Weston Electric Co.	Newark, N. J.	8/40; 7/42
Weyerhauser Timber Co.	Everett, Wash.	9/44
" " "	Longview, Wash.	7/44
" " " - Pulp Div.	Everett, Wash.	9/43
" " " " "	Longview, Wash.	7/44
Wheeling Steel Corp. 2/	Wheeling, W. Va.	9/43
White, S. S., Dental Co.	Prince Bay, N. Y.	10/41
" - Rogers Electric Co.	St. Louis, Mo.	11/43
Wickwire Spencer Steel Corp.	Tonowanda, N. Y.	9/43
Willaims, J. H.	Buffalo, N. Y.	10/43
Williamson-Dickie Mfg. Co.	Fort Worth, Texas	3/44
Wilson Hosiery Mill	Haw River, N. C.	7/43

2/ Data on 4 additional Wheeling Steel Corp. plants that employed women, were included in this schedule and were used in Steel Report by E.E.

NAME OF PLANT	LOCATION	DATE OF SURVEY
Wilson Packing Co.	Cedar Rapids, Ia.	12/43
Winchester Repeater	New Haven, Conn.	10/40; 11/42
Wisconsin Steel Co.	S. Chicago, Ill.	10/43
Wolf Creek Ordnance	Milan, Tenn.	2/42
Woodworth, N. A.	Ferndale, Mich.	4/43
Woolensock Optical Co.	Rochester, N. Y.	10/41
Worthington Pump	Harrison, N. J.	8/40; 7/42
Wright's Aeronautical Co.	Paterson, N. J.	8/40; 7/42
" Automatic Machinery	Durham, N. C.	7/43
York Corp.	York, Pa.	11/43
" Safe & Luck Co.	" "	11/43
Youngstown Sheet & Tube Co.	Indiana Harbor, Ind.	9/43
" " " "	Youngstown, Ohio	10/43

August 1940

WOMEN'S BUREAU
U.S.Department of Labor
Washington

WOMEN AVAILABLE FROM EMPLOYMENT ROLLS FOR CERTAIN TYPES OF DEFENSE WORK (April 1940)

I. Women Available in 14 States for Work in 5 Industries

1. Metal factories
2. Electrical supply factories
3. Transportation equipment
4. Chemical plants
5. Watches and clocks

II. Metal-Work Occupations for Which Women Are Available

A. In 14 States
B. In 4 Regional Groups of States

III. Certain Contracts Let in 24 States and Women Available for Such Work
(Includes also reports for 8 other States - 32 in all:
2 in which no contracts were reported
6 in which details as to occupations not given)

A. States with reports on Contracts Let and Women Available

1. Illinois, Indiana, Ohio, Kentucky, Missouri, Iowa
2. Michigan, Wisconsin, Minnesota
3. New York, Pennsylvania, New Jersey, Maryland
4. Connecticut, Massachusetts, Rhode Island
5. California, Washington
6. Texas
7. Alabama, Georgia, North Carolina, Tennessee, Virginia

B. States with No Contracts reported
Florida (with group 7); Maine (with group 4)

C. States with Contracts Reported but no Detail as to Women
Kansas, Nebraska (with 1)
Vermont (with 4)
Colorado (with 5)
Louisiana, Oklahoma (with 6)

Prepared by MEP

I. WOMEN AVAILABLE IN 14 STATES FOR 5 TYPES OF WORK (June 1940)

1. For Metal Factory Work

Connecticut -	1,759
Michigan -	1,658
New York -	1,521
Buffalo -	407
New York City Area-	299
Syracuse -	279
Rochester -	68
Illinois -	1,238
Ohio -	1,107
New Jersey -	1,097
Indiana -	479
Pennsylvania -	368
Massachusetts -	327
Wisconsin -	212
Missouri -	150
Rhode Island -	124
Maryland -	123
California -	103
Minnesota -	73

By Regions

Mass.,R.I.,Conn. -	2,210
N.Y.,Pa.,N.J.,Md.-	3,109
Ohio,Ind.,Ill.,Mo.-	2,974
Mich.,Wis.,Minn. -	1,943
or Ill.,Wis. -	1,450
Ind.,Mich.-	2,137

2. For Electrical Supply Factory Work

New Jersey -	2,106
New York -	1,572
New York City Area -	632
Buffalo -	487
Rochester -	257
Syracuse -	38
Illinois -	1,287
Ohio -	889
Massachusetts -	857
Connecticut -	832
Michigan -	795
Pennsylvania -	668
Indiana -	533
Wisconsin -	268
Rhode Island -	207
Missouri -	199
California -	69
Maryland -	48
Minnesota -	24

By Regions

Mass.,R.I.,Conn. -	896
N.Y.,Pa.,N.J.,Md. -	4,394
Ohio,Ind.,Ill.,Mo. -	2,908
or Ill,Wis. -	1,555
Ind.,Mich. -	1,328
Michi,Wis.,Minn. -	1,087

3. For Work on Transportation Equipment

Illinois -	549
Michigan -	529
Indiana -	237
Ohio -	176
New York -	75
New Jersey -	68
Pennsylvania -	33
Massachusetts -	21
Connecticut -	3

By Regions

Mass., Conn. -	24
N.Y., N.J., Pa.	176
Ohio, Ind., Ill., Mich. -	1,491

4. For Work in Chemical Plants

New York -	214
New York City Area -	170
New Jersey -	162
Pennsylvania -	28
Illinois -	25
Ohio -	23
Massachusetts -	22
Connecticut -	14
Michigan -	23

By Regions

Mass., Conn. -	36
N.Y., N.J., Pa. -	404
Ohio, Ill., Mich. -	71

5. For Work on Watches and Clock

Rhode Island -	1,192
New York -	424
New York City Area -	345
Rochester -	76
Massachusetts -	308
Illinois -	135
Connecticut -	150
New Jersey -	129
Pennsylvania -	21

By Regions

Mass., Conn., R.I. -	1,650
N.Y., N.J., Pa. -	574

II.A. - TYPES OF METAL-WORK OCCUPATIONS FOR WHICH WOMEN ARE AVAILABLE IN 14 STATES

	Ohio	Ind.	Ill.	Mo.	Mich.	Wis.	Minn.	N.Y.	Pa.	N.J.	Md.	Mass.	Conn.	R.I.	Calif.
All occupations 1/	1,107	479	1,238	150	1,658	212	73	1,521	368	1,097	123	327	1,759	124	103
Rolling, stamping	394	196	338	82	966	137	18	442	92	332	82	93	400	57	41
Machine shop, n.e.c.	184	65	102	18	341	20	2	395	49	86	3	42	133	11	-
Fabrication, n.e.c.	138	40	209	27	33	18	33	195	53	165	34	32	248	14	29
Welders, flame cutters	55	15	30	4	58	9	-	9	15	68	1	9	2	2	5
Machinists	69	23	110	-	27	-	2	112	3	17	1	17	137	5	1
Filers, grinders	56	15	46	5	48	5	1	71	17	42	1	21	31	1	15
Foundry, n.e.c.	43	35	19	3	92	8	4	30	46	7	-	6	3	2	3
Furnacemen, smelters	-	1	4	-	-	-	1	19	1	1	-	-	1	-	1
Toolmakers, diesinkers	2	-	1	-	2	-	-	-	1	6	-	2	-	2	2
Blacksmith, forgemen	1	-	5	-	3	-	-	6	2	1	-	-	1	-	-
Tinsmiths, coppersmiths	-	-	1	-	1	1	-	4	-	4	-	1	-	3	-
Molders	-	-	1	-	-	-	-	10	-	-	-	-	-	-	1
Heat treaters, annealers	4	-	1	-	2	-	-	-	1	-	-	-	-	2	1
Ore dressers	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-

1/ Total exceeds details. Each State had a group "inter-industry occupations" in metal work.

II.B. - TYPES OF METAL-WORK OCCUPATIONS FOR WHICH WOMEN ARE AVAILABLE IN 4 REGIONAL GROUPS OF STATES

	Ohio, Ind., Ill., Mo.	N.Y., Pa., N.J., Md.	Mass., R.I., Conn.	Mich., Wis., Minn.
Total 1/	2,974	3,109	2,210	1,943
Rolling, stamping	1,010	948	550	1,121
Machine shop, n.e.c.	369	533	186	363
Fabrication, n.e.c.	414	447	294	84
Welders, flame cutters	104	93	13	67
Machinists	202	133	159	29
Filers, grinders	116	131	53	54
Foundry, n.e.c.	100	83	11	104
Furnacemen, smelters	5	21	1	1
Toolmakers, diesinkers	3	7	4	2
Blacksmiths, forgemen	6	9	1	3
Tinsmiths, coppersmiths	1	8	4	2
Molders	1	10	-	-
Heat treaters, annealers	5	1	2	2
Ore dressers	-	1	1	1

1/ Total exceeds details. Each State had a group of "inter-industry occupations" in metal work.

III. - CERTAIN CONTRACTS ~~S~~LET IN 24 STATES

ILLINOIS AND INDIANA

		Illinois	Indiana
Women Available	- Total - 1/	11,522	6,390
	Metal -	1,238	479
	Electrical	1,287	533
	Chemical	25	12
	Transportation equipment	549	237
	Clock and watch	135	12

1/ Except "unskilled."

Contracts Let Include (August 1940) -

Metal

Heavier Machines

Chicago
- Hydraulic press
- Drilling machines
- Valve machines
- Tractors
- Electric trucks
- Locomotive cranes
- Bending machines
- Teletype machines

State
- Tractors, motor graders
- Locomotives

Indiana
- Trucks
- Drilling machines
- Boosters
- Air compresser
- Engine lathes

Metal

Parts and Smaller Tools

Chicago
- Valves
- Booster,metal components
- Brass forgings

State
- Reel units
- Diesel parts

Indiana
- Chains
- Tracks, gate frames
- Airplane parts, carburetors,wheel assemblies

Instruments

State
- Governors

Electrical

Chicago
- Telephone equipment
- Electrical apparatus
- X-ray outfits
- Welding electrodes
- Telephones
- Radios

State
- Transformers

Indiana
- Acetylene cylinders

Munitions

Chicago
- Cartridge containers
- Gas masks
- Ammunition
- Ammunition parts

State
- Machined shells

Indiana
- Machined shells

OHIO AND KENTUCKY

Women Available -

	Ohio	Kentucky
Total 1/	14,022	3,302
Metal work -	1,107	47
Electrical -	889	143
Chemical -	23	3
Transportation equipment -	176	-
Clock and watch -	14	-

1/ Excluding "unskilled."

Contracts Let Include (August 1940) -

Metal

Heavier machines
- Kentucky - Elevators
- **Ohio** -
  - **Cleveland** -
    - Turret lathes
    - Light tank hulls
    - Electric trucks
    - Twist drills
    - Forging machinery
  - **Cincinnati** -
    - Truck tractors
    - Lathes
    - Boring machines
    - Planers
    - Radial drills
    - Turret lathes
    - Milling machines
  - **State** -
    - Drill presses
    - Gun carriages
    - Power shovels
    - Lathes
    - Presses
    - Locomotives
    - Gun boring lathes
    - Bridge crane
    - Drop hammer

Metal

Parts and Small Tools
- **Cleveland** -
  - Pump assemblies
  - Diesel parts
  - Carriage bolts
  - Welders
  - Small tools
- **Cincinnati** -
  - Forgings
  - Press brakes
- **State** -
  - Screw drivers
  - Propeller blades
  - Machining shells
  - Motor parts

Electrical

Cleveland - Welding electrodes
State - Lamp assemblies
Signals
Transformers
Aircraft flares
Generator sets
Searchlight towers

Instruments

State - Telescope mounts

Munitions

Cincinnati - Practice bombs

State - Fuses
Gas mask carriers

IOWA, KANSAS, MISSOURI, NEBRASKA

	Iowa	Missouri	Kansas	Nebraska
Women Available - Total 1/ -	2,454	10,497	1,499 2/	619 2/
Metal	5	150		
Electrical	10	199		
Chemical	1	6		
Transportation equipment	2	19		
Clocks and watches	2	7		

1/ Except "unskilled."
2/ Details not secured.

Contracts Let Include (August 1940) -

Metal

Heavier Machines
Missouri - Gas ranges
Kansas - Airplanes

Electrical

Missouri - Transmitters

Munitions

Iowa - Machine-gun assemblies
Nebraska - Machines shells

MICHIGAN

	Michigan
Women Available - Total 1/	11,119
Metal	1,658
Electrical	795
Chemical	23
Transportation equipment	529
Clocks and watches	14

1/ Except "unskilled."

Contracts Set Include (August 1940) -

Metal

Heavier Machines

Michigan - Trucks
Presses
Twist drills
Profiling machines
Shovels
Milling machines
Shaper
Tractors

Metal

Parts and Small Tools

Michigan -Tools,fixtures
Diesel parts
Forgings
Seats,valves
Gages
Wheel and brake assemblies
Brass forgings
Aircraft engines and parts

Electrical

Michigan - Detonators

Munitions

Michigan - Fuses, bombs,machining shells
Cartridge cases
Machined shells
Machine guns

WISCONSIN AND MINNESOTA

	Wisconsin	Minnesota
Women Available - Total 1/ -	5,761	6,086
Metal	212	73
Electrical	268	24
Chemical	2	2
Transportation equipment	19	1
Clock and watch	7	1

1/ Except "unskilled."

Contracts Let Include (August 1940) -

Metal

Heavier Machines

Wisconsin - Jack assemblies
Heavy tractors
Broaching mch.
Electric drills
Milling machines
Trailers and dollies
Motorcycles
Bridge cranes
Turret lathes
Power shovels
Boring machines

Minnesota - Winches
Gas ranges

Metal

Parts and Small Tools

Wisconsin - Sextants
Castings and armor plates
Valves
Power units
Reel units

Minnesota - Fuel oil pumps
Hydraulic parts

Electrical

Wisconsin -
Electrical equipment

Munitions

Minnesota -
Machining shells

NEW YORK

Women Available - Total 1/ -	90,063	New York City Area	Buffalo	Syracuse	Rochester
Metal -	1,521	299	407	279	69
Electrical -	1,672	632	487	47	257
Chemical -	214	170	6	3	-
Transportation equipment -	75	17	29	9	1
Professional & scientific apparatus	5	-	-	-	-
Clock, watch & jewelry	415	356	2	3	76

1/ Excluding "unskilled."

Contracts Let Include (August 1940) -

Metal

Heavier Machines

New York City Area
- Drills
- Flat cars
- Elevator machinery
- Electric hoists
- Hydraulic press
- Towing carriage

Rochester - Engine lathes
Syracuse - Engine lathes
State - Bridge and wall cranes

Parts and Small Tools

New York City Area
- Cylinder forgings
- Tube fittings
- Steel rods
- Brass nuts

Buffalo
- Airplane parts

State
- Pliers
- Aircraft axles
- Compressers, girders, wire

Electrical

New York City Area
- Radio receivers
- Radio cabinets
- Searchlight units
- Electric cable

Rochester
- Telephone switchboards

Syracuse
- Lamp assembly

State
- Electrical equipment
- Magneto assemblies
- Power plant assemblies

Instruments

New York City Area
- Timing apparatus
- Aircraft clocks
- Navigation watches
- Telescopes
- Height finders
- Elbow telescopes

Rochester
- Optical instruments
- Telescopes
- Height finders
- Cameras

State
- Aircraft cameras
- Aircraft instruments

Munitions

New York City Area
- Machine shells
- Bomb bodies
- Rifle parts

Rochester
- Machine gun assemblies
- Machine shells

PENNSYLVANIA

Women Available - **Total 1/** - **21,417**

Metal -	368
Electrical -	1,027
Chemical -	28
Transportation equipment -	33
Clock and watch -	20

1/ Excluding "unskilled."

Contracts Let Include (August 1940) -

Metal

Heavier Machines

Philadelphia Area
- Diesel engines
- Planers, radial drills
- Milling machines
- Lathes

State
- Diesel engines
- Power shovels
- Trailers
- Hydraulic press

Parts and Small Tools

Philadelphia Area
- Steel forgings, tubes for guns
- Files, rasps
- Doors, latches
- Hydraulic valves
- Diesel parts
- Machine forgings
- Gears
- Tube fittings

Pittsburgh
- Nuts and bolts
- Forgings

State
- Chemical containers
- Steel rods
- Centrifugal castings
- Base rings
- Windlasses, steering gear
- Die castings
- Wire

Electrical

Philadelphia Area
- Storage batteries

Pittsburgh
- Transformers
- Electrical equipment, arc welders, lamps, etc.

State
- Electric trucks
- Generator sets

Instruments

Philadelphia Area
- Air ejectors
- Telescope mounts
- Testing machines

State
- Turbine governor
- Instruments

Munitions

Philadelphia area - Gun barrels
Ammunition parts

State - Gun barrel forgings
Gun saddles
Shell forgings
Machining shells
Bombs, metal components
Gun carriages

NEW JERSEY AND MARYLAND

		New Jersey	Maryland
Women Available -	Total 1/	28,495	4,777
	Metal -	1,097	123
	Electrical -	2,105	68
	Chemical -	162	14
	Transportation equipment -	66	-
	Professional & scientific apparatus -	4	-
	Clock, watch, jewelry	118	4

1/ Excluding "unskilled."

Contracts Let Include (August 1940) -

Metal

Heavier Machines

Gear-cutting machine

Maryland - Elevators
Blast cleaning rooms
Maintenance equipment
Gun carriages

Parts and Small Tools

Wire
Insulated cable
Fire extinguishers
Pliers
Aircraft engine parts, crank shafts
Fire control apparatus

Munitions

Pistols
Machinegun parts
Guns
Ammunition boxes

Electrical

Lamp assemblies
Electrical equipment, rectifiers
Radio parts
Crystal unit coil set
Lamp mountings
Generators
Signals
Evergizer assemblies

Maryland - Signals
Welding electrodes
Switch gear

Instruments

Surgical instruments
Instruments
Aircraft instruments

CONNECTICUT

Women Available - **Total 1/** -	**8,795**
Metal -	1,759
Electrical -	832
Chemical -	302
Transportation equipment	3
Clock, watch, jewelry	150

1/ Excluding "unskilled."

Contracts Let Include (August 1940)

Metal

Heavier Machines

Bridgeport
- Drilling machines
- Boring machines, turret, lathe
- Routing machine
- Pneumatic drills

State
- Fuel pumps
- Chucking machine
- Lathes
- Reaming machines
- Drop hammers
- Gaging machines

Parts and Small Tools

State
- Wire rope
- Diesel parts
- Airplane parts
- Aircraft engines
- Propeller assemblers
- Tubing

Munitions

Bridgeport
- Cartridges
- Ammunition

State
- Machined shells
- Fuses, bombs
- Cartridge cups and discs
- Fuse parts

Electrical

- Code transmitter
- Electrical equipment
- Signals(ground,parachute)

Instruments

- Desk clocks
- Speed control units

MASSACHUSETTS

Women Available - Total 1/	26,036
Metal -	[illegible]327
Electrical -	857
Chemical -	22
Transportation equipment	21
Clocks and watches	308

1/ Excluding "unskilled."

Contracts Let Include (August 1940) -

Metal

Heavier Machines

Lathes, mills, grinders
Cylinder grinder
Engine lathes
Wood screws
Topping machine
Boring Machine
Motorcycles

Parts and Small Tools

Machinegun parts
Range quadrants
Diesel parts
Propellor dolly assemblies
Taps and dies

Munitions

Guns
Pistols
Rifle parts
Howitzers
Gas masks

Electrical

Telephones and parts
Aircraft parachute flares
Radio headset, fire control instruments

Instruments

Instruments
Gages

RHODE ISLAND, VERMONT, MAINE

	Rhode Island	Maine	Vermont 2/
Women Available - Total 1/ -	8,015	3,581	1,201
Metal -	124	20	
Electrical -	207	1	
Chemical -	4	1	
Clocks, watches -	1,192	1	

1/ Excluding "unskilled."
2/ Details not secured.

Contracts Let Include (August 1940) -

Metal

Heavier Machines

Milling machine, screw machine
Chucking machine

Vermont - Screw machine
Lathes

Parts and Small Tools

Roller paths
Wire and related items
Wire staples
Tools, fixtures

Electrical

(none reported)

Instruments

Telescope mounts

CALIFORNIA, WASHINGTON, COLORADO

	California	Washington	Colorado 2/
Women Available - Total 1/	19,077	2,932	751
Metal -	103	20	
Electrical -	69	6	
Chemical -	3	6	
Transportation equipment	12	2	
Clock and watch	13	3	

1/ Except "unskilled."
2/ Details not secured.

Contracts Let Include (August 1940) -

Metal

Heavier Machines

California - Trainer assemblies
Cranes
Power trailers
Gate hoists

Washington - Boilers

Parts and Small Tools, etc.

California - Tools and equipment
Folding anchors
Gun sights, plane parts
Tube valves

Washington - Non-coconut charcoal

Electrical

Washington - Switchboards

Munitions

California - Cartridge cases
Demolition bombs
Fuses, bombs

Colorado - Machined shells
Shell forgings

TEXAS, LOUISIANA, OKLAHOMA

	Texas	Louisiana 2/	Oklahoma 2/
Women Available - Total 1/ -	9,656	1,617	1,428
Metal -	22		
Electrical -	7		
Chemical -	4		

1/ Except "unskilled".
2/ Details not obtained.

Contracts Let Include (August 1940) -

Heavier Metal
Texas - Diesel engines

Munitions
Louisiana - Machining shells
Oklahoma - Machined shells

ALABAMA, FLORIDA, GEORGIA, NORTH CAROLINA, TENNESSEE, VIRGINIA

Women Available

Total 1/	Alabama 5,329	Florida 2,352	Georgia 11,057	North Carolina 8,014	Tennessee 8,495	Virginia 3,368
Metal -	10	9	31	14	57	11
Electrical -	3	1	26	6	16	3
Chemical -	1	2	1	6	30	2
Transportation equipment -	-	1	4	2	4	1
Clock and watch -	-	3	-	-	4	1

1/ Excluding "unskilled."

Contracts Let Include (August 1940) -

Metal

Heavier Machinery

Alabama - Air compressors

North Carolina - Trailers

Virginia - Boring mill

Parts or Small Tools

Alabama - Forgings

Munitions

Alabama - Machining shells

Georgia - Machining shells

Tennessee - Machined shells
Fuse, point detonating

MEP

WOMEN IN DEFENSE: MATERIAL FOR DISTRIBUTION BY WOMAN'S BUREAU
November 1940

I. STANDARDS

1. Special Bulletin 1, Effective Industrial Use of Women in the Defense Program

2. Mimeo: Experience as to Standards for Women's Work in Periods of Rapid Increase in Production (Oct.1939). (This summarizes the British and American experience 1914-18, showing need for maintaining standards; efforts in the United States to break down legal standards; statements of officials and organizations designed to maintain standards.)

II. PROCESSES

1. Mimeo: Processes on Which Women are Now at Work in Defense Industries (October 1940). (This summarizes types of jobs done by women in airplane factories;plants making instruments; electrical products plants; machine tool factories; gun and ammunition plants; and other metal and electrical supply manufacturing processes.

2. Mimeo: Women's Technical Training Needs in the Defense Industries (November 7, 1940). (This gives additional lists of occupations performed by women.)

3. Mimeo: Increase in Women Employment 1914-18 and Occupations of Women in Defense Industries (November 1940). (This gives an additional longer supplementary list of occupations performed by women 1914-18. The major part of this material is taken from Women's Bureau Bul.12, but other sources also are used.)

III. AVAILABILITY

1. Mimeo: Women Available for Defense Work. (Mimeograph under this title prepared October 1940 includes information as to women on Employment Service Rolls and women on W.P.A. projects.

IV. TRAINING

1. Mimeo: Women's Vocational Training Needs in Defense Industries (November 7, 1940). (Mimeograph under this title includes training needs in industrial processes: For new clerical needs, p.5; for defense services, page 6-7).

V. INCREASE IN NUMBERS OF WOMEN EMPLOYED IN DEFENSE INDUSTRIES

1. Mimeo: Increase in Women Employment 1914-18, and so forth. (This summarizes from Women's Bureau Bul.12 the experience of 1914-18 as to the great increase in factory employment of women.

INVESTIGATION OF WOMEN'S ROLE IN DEFENSE INDUSTRIES

In Progress, April 10, 1941.

Aircraft -	Field investigation by Miss Manning and earlier by Miss Erickson
Shells Ammunition Propellants and Explosives	Field investigation by Miss Erickson Research had been done by Miss M. K. Anderson Health aspects investigated by Mrs. Mettert
Foreign sources on women's occupations	Research by Miss M. K. Anderson, and also by Miss Porter. Miss Benham continually following current material and noting if specific.
Especially the subject of "dilution", here or abroad, particularly in industries so-far not gone into (for example, auto construction, bombers, heavier ordnance, or other industries on defense list).	Research by Miss Hooks.

DISTRIBUTION OF WOMAN POPULATION IN THE UNITED STATES

Population Classification	Women in the United States (1940) (In millions) Total 14 and over 1/	Aged 18-44 2/
Total Population	50.55	28.34
Labor Force	12.84	9.72
Employed	11.14	8.46
On Emergency Work	.46	.28
Seeking Work	1.25	.96
Experienced	.94	.73
New	.30	.23
Not in Labor Force	37.70	18.63
At Own Home Housework	28.66	16.45
In School	4.42	.88
Unable to Work	2.30	.32
In Institutions	.41	.16
Other and Unknown	1.91	.77

1/ Final figures.
2/ Preliminary. Final will not be available for some time to come.

April 22, 1942.

Research Division

MATERIAL TO BE SENT TO PERSONS REQUESTING FOLDER USED AT WOMEN'S BUREAU ADVISORY COMMITTEE CONFERENCE

November 7, 1940

1. Increase in Woman Employment 1914-18 and Occupations of Women in Defense Industries (1914-18) (mimeographed)
2. Processes on Which Women are Now at Work in Defense Industries (October 1940) (mimeographed)
3. Women Available for Defense Work (mimeographed)

Mimeographed list of organizations represented at conference also can be included if the person asking for folder requests it.

Copies of the Woman Worker for September and November 1940 were also included in the folder. Since the numbers of the Woman Worker for distribution are limited these are not to be sent unless especially requested by the person asking for the folder.

MEP:ld
November 13, 1940

D-48
Wom

A

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WOMEN'S BUREAU
Washington

WOMEN'S BUREAU
AUG 5 1945
DEPARTMENT OF LABOR

EXPERIENCE AS TO STANDARDS FOR WOMEN'S WORK IN PERIODS OF RAPID INCREASES IN PRODUCTION

Increase in Woman Employment, 1914-1918

Relaxation of State Labor Laws for Women, 1917-1918

Efforts to Maintain Labor Standards for Women, 1917-1918

Evidences of Ill Effects of Relaxing Labor Standards

Legal Standards for Women's Work: 1918 Compared to 1939

October 1939

U. S. Department of Labor
WOMEN'S BUREAU
Washington

EXPERIENCE AS TO STANDARDS FOR WOMEN'S WORK IN PERIODS OF RAPID INCREASES IN PRODUCTION

Hostilities in Europe are certain to affect economic life in other parts of the world. In the United States, added demands in the home market and orders from abroad as well are increasing production and the demand for labor. Much of this demand is in industries and occupations employing women. For example, employment is increasing in most of the clothing, certain of the largest textile, and some of the food industries.

The United States has an ample labor supply, the necessary raw materials, machinery and other industrial equipment to meet the demand. Thus there seems no excuse for abnormal rises in price, nor for efforts to break down the labor standards built up over a considerable period of time, which include: reasonable length of working time, wages designed to meet the cost of living, suitable physical working conditions, safeguards against industrial hazards and poisons, and so forth.

Years of experience have yielded abundant scientific evidence showing that adherence to such standards is necessary to maintain the welfare of the workers, and that it is essential in securing the highest level of production.

The experience in 1914-1918, both in this country and in England, affords some indication as to the conditions of work likely to accompany an upward trend of production such as is evident today. The pages following summarize some of this earlier experience, especially as to:

The rapid increase in woman employment, 1914-1918;

Efforts in this country to break down labor standards for women, 1917-1918;

Efforts to maintain labor standards: by various organizations; by officials, through statements and policies;

Experience as to the serious effects of relaxing labor standards, especially in Great Britain;

Extent of labor legislation for women in 1940 as compared to 1918.

INCREASE IN WOMAN EMPLOYMENT, 1914-1918

The 1919 Census of Manufactures showed a 45 percent increase in woman employment over the 1909 Census. Though the position of women in 1919 dropped well below the extreme war peak, it was still far above the period before the war. A study the Women's Bureau made of the labor force of leading war agent and implement industries showed the following increases: 1/

	Number of women per 1,000 persons employed				
	1914	1916	After first draft	After second draft	1919
All firms included....	65	77	106	139	100
474 identical firms...	--	102	130	182	143

Women performed many processes entirely new to them and took many responsible posts. A study of women's war work in New York states: 2/

> ". . . An English engineer at the end of 2 years of war claimed that he could build a battleship from keel to aerial entirely by woman power. A New York maker of automobiles planned during the war to place women in every department from the drafting room to the assembling shop.
>
> ". . . women filled first those vacancies where the work was light, less skilled and repetitive, on such metal-cutting machines for instance as lathes, stamping machines and gear shapers. Heavy or skilled work was attempted only after considerable time had elapsed, or in response to unusual conditions such as existed in western New York . . . when the Government placed contracts in Buffalo for aeroplanes and motor trucks, women . . . in large numbers (were) placed in every conceivable process . . . In Niagara Falls, the chemical plants . . . placed women on work of an exceedingly heavy character. They became yard laborers, with pick and shovel, bricklayers' helpers and furnace stokers."

The compensation women received was not what had been paid to men, though a number of employers were emphatic in stating that women in their plants produced more than the men they replaced. In no case did any woman surveyed receive as much as a man doing the same work in the same plant. Almost every woman producing more than a man received not over 75 percent of the men's wages, and all received from $1.08 to $11 less than the wage paid to workers who were not so desirable.

A report of the War Department 3/ shows that in England, and to a lesser degree in this country, women were at work even in the training camps in certain of their more or less traditional pursuits, looking after food and clerical occupations.

1/ The New Position of Women in American Industry. Women's Bureau Bulletin No. 12. 1920.

2/ The Industrial Replacement of Men by Women in New York. Special Bulletin, New York Department of Labor. 1919.

3/ A report on the Work of Women in Military Training Camps in the United States — War Department Commission on Training Camp Activities.

RELAXATION OF STATE LABOR LAWS FOR WOMEN 4/

America's entrance into the conflict of 1914-1918 was seized by the old-time enemies of labor laws as an excuse for temporary suspension. An executive order of March 22, 1917, prior to American participation in war, suspended the 8-hour day on Government shipbuilding and munition contracts. At the very outbreak of the war, a movement was begun to lower labor standards. The New York Federation of Labor, in a burst of patriotic fervor, had declared in favor of relaxing laws which restrict hours of work. The Council of National Defense urged that governors be vested with authority to suspend or modify legal restrictions at the recommendation of the Council.

An emotional disregard of experience swept through both England and this country. Vermont, New Hampshire, Connecticut, and Minnesota passed laws giving the governor power to suspend labor regulations. A Massachusetts law placed such suspension in the hands of a board including representatives of both employers and workers, with the State Commissioner of Labor and Industries as chairman. The New York legislature passed a similar bill, but it was vetoed by the governor, who at the same time signed a bill permitting the employment of children in agricultural pursuits between April 1 and November 1.

Factories in Bridgeport, Conn., instituted a continuous night shift. Machinists in Philadelphia contended that certain employers unduly anticipated a shortage of skilled labor and resorted to indiscriminate recruiting of women not from motives of patriotism but with a view to undermining men's standards. Numerous reports exist showing the conditions of work at that time in various industries and localities. For example, a Russell Sage Foundation investigation showed accidents in munitions making in Bridgeport. A Women's Bureau investigation showed the prevalence of industrial poisons and detrimental fumes and gases in Niagara Falls, N. Y., a center for the manufacture of abrasives for grinding wheels, and carborundum products essential in machine industries, storage batteries, picric acid for explosives, chlorine, formaldahyde, and a variety of other chemicals and gases. Conditions in the Government Printing Office in Washington, D. C., and in the Charleston Navy Yard were reported, and so forth.

4/ See articles in The Survey, January 6, April 21, June 9, and October 27, 1917; The Monthly Review of the Bureau of Labor Statistics, May 1917; the New Republic, December 15, 1917, and July 13, 1918; The American Labor Legislation Review, December 1918.

EFFORTS TO MAINTAIN LABOR STANDARDS FOR WOMEN 5/

Agencies and individuals that realized the importance of healthful labor standards, not only to public welfare but to national production as well, pursued vigorous policies to maintain adequate standards. The American Association for Labor Legislation, the Consumers' League, the Women's Trade Union League and the American Federation of Labor made a stand against the labor law exemptions that were occurring. The National Child Labor Committee issued an appeal for the protection of children. The American Association for Labor Legislation began the publication of a special bulletin, the first issue appearing in April 1917 entitled "Labor Laws in War Time."

The activities of these groups were not without effect. President Wilson, Secretary of War Baker and Secretary of the Navy Daniels expressed their desire to maintain standards. The Council of National Defense took a similar attitude. The War Labor Conference Board formulated a statement of national policies which should underlie industrial relations during the war. This stated that "if it shall become necessary to employ women on work ordinarily performed by men, they must be allowed equal pay for equal work and must not be allotted tasks disproportionate to their strength." Finally, the War Department issued its famous "General Orders No. 13" upholding standards of work on goods for the Government.

One of the first acts of the War Labor Policies Board was its recommendation that the provisions of the Federal Child Labor Law, which had recently been declared unconstitutional by the Supreme Court, should be written into contracts of all the producing departments represented in the Board. Shortly afterward a clause requiring full compliance with State labor laws was added to the contracts. The contracts with the Quartermasters Department also contained clauses prohibiting the giving out of Army clothing to be made or finished in tenements. From the point of view of enforcement the significant fact in the conditions of women's work during the war was the insistence of the Federal Government upon the observance of State labor laws.

Many reports show the activities of organizations and of State authorities toward various economic adjustments; for example the National League for Women's Service assisted with the training and placement of women, as did also the Women's Committee of the Pennsylvania Council of National Defense; a War Emergency Conference called in the State of Washington, which specified a minimum weekly wage; and so forth.

Extracts from some of the important statements and policies are given below. These are shown in chronological order of issuance rather than according to the importance of their sources, since this method gives a little better picture of the movement of the times.

5/ See: Monthly Review of the U.S. Bureau of Labor Statistics, May 1917 and January 1918; The Survey, June 9, 1917, and May 26, 1917; Chief of Ordnance General Orders No. 13, November 1917; Storage Com. of War Industries Board, Bulletin No. 9; New Republic, May 25, 1918; American Labor Legislation Review, December 1918; Annals of the American Academy, January 1919, esp. pp. 87-90.

Association for Labor Legislation. March 23, 1917.

This Association issued a formal summary of the essential minimum labor requirements, which included the maintenance of all existing standards in respect to: safeguarding of machinery; prevention of occupational disease; the basic working day; wage rates for the basic working day; special regulations regarding women's work, including maximum hours, prohibitions of night work and of hazardous employments, and prohibitions of employment immediately before and after childbirth. Also called for wore extension of the public employment systems and the workmen's compensation laws; time and one-half pay for overtime; one day's rest in seven for all workers; the three-shift system in continuous industries; periodic revision of wage rates with variations in living costs; equal pay for equal work, without discrimination as to sex; increased appropriations for labor inspection staffs; joint councils of employers, employees and public to cooperate with labor departments.

National Consumers' League. April 6, 1917.

A letter of appeal from its secretaries, Mrs. Florence Kelley and Miss Pauline Goldmark, urging the maintenance of existing labor standards, was sent to the National League for Women's Service, the New York State Woman Suffrage Party, the National Council of Women, and the women's section of the National Service School.

The letter appealed to each organization to (1) preserve short working hours wherever they exist; (2) maintain the present minimum of sanitation and safety; (3) keep the children in school by means of scholarships where necessary; (4) uphold the standard of living for the family, whether the chief wage earner is a soldier at the front or working on national supplies at home. The letter states:

> "In the light of English experience . . . whatever emergency measures may be indispensably necessary . . . should be exceptional and strictly temporary."

Council of National Defense. April 7, 1917.

The Council urged upon the States "the great duty of rigorously maintaining the existing safeguards as to the health and the welfare of workers", at the same time the Council advocated that legislatures grant governors authority to suspend or modify the existing standards if subsequently requested by the Council. The Council also advised "that neither employers nor employees shall endeavor to take advantage of the country's necessities to change existing standards." There was so much discussion of this last statement that on April 21 the Council undertook to clarify it, saying:

> " . . . no arbitrary changes in wages should be sought at this time by either employers or employees through the process of strikes or lock-outs without at least giving the established agencies of the Government —of the Mediation Board in the transportation service and the Division of Conciliation of the Department of Labor in the other industries — an opportunity to adjust the difficulties without a stoppage of work occurring. . ."

Policy of the Navy Department. April 16, 1917.

Secretary Daniels wrote Professor Irving Fisher of Yale, president of the American Association of Labor Legislation, as follows:

> " . . . It is of great national concern that at the outset of war this country shall maintain a scientific program of legal protection for workers, in the interest of both maximum production and human conservation. We must not permit overzeal to lead to the weakening of our protective standards and hence to the breaking down of the health and productiveness of labor."

Statement of President Wilson. May 1917.

> "I have been very much alarmed at one or two things that have happened — at the apparent inclination of the legislature of one or two of our States to set aside even temporarily the laws which have safeguarded standards of labor and of life. I think nothing would be more deplorable than that. We are trying to fight in a cause which means the lifting of the standards of life, and we can fight in that cause best by voluntary cooperation. I do not doubt that any body of men representing labor in this country; speaking for their fellows, will be willing to make any sacrifice that is necessary in order to carry this contest to a successful issue, and in that confidence I feel that it would be inexcusable if we deprived men and women of such a spirit of any of the existing safeguards of law. Therefore, I shall exercise my influence so far as it goes to see that that does not happen and that the sacrifices we make shall be made voluntarily and not under the compulsion which mistakenly is interpreted to mean a lowering of the standards which we have sought through so many generations to bring to their present level."

Bureau of Labor Statistics.

April 30, 1917. The great danger, from the standpoint of health, is that the employment of women should be resorted to merely in order to obtain cheap labor. As a matter of public health, we must see to it that women are paid equal wages for equal work. Otherwise their employment can be and is daily being made the excuse for undercutting the standard wage of men and so reducing the standards of living in the community.

Article in Monthly Review, January 1918. In regard to the general replacement of men by women workers, no single consideration is more important than the matter of wages. This is moreover not a social or economic question alone. It is primarily a question of health and must be of the first importance to all those concerned with public health issue. The reports of the Children's Bureau and Public Health Service have shown how infant mortality rises in direct proportion to fall in wage.

National Women's Trade Union League. June 1917 (Convention).

The Convention recommended that the Government shall require in its contracts equal pay for equal work; that technical and trade training be open to women in all schools and colleges on equal terms with men; that in the establishment of local committees of mediation and conciliation of industrial disputes, trade-union women as well as men be appointed. The following standards for work on Government contracts are urged:

1. Adult labor.
2. Wages —
    a. The highest prevailing rate of wages in the industry which the contract affects.
    b. Equal pay for equal work.
    c. Those trades where there is no wage standard whatsoever shall be placed in the hands of an adjustment committee.
    d. That all wages be adjusted from time to time to meet the increased cost of living — by this committee — and that the other wage questions be submitted to it.
3. The 8-hour day.
4. One day's rest in seven.
5. Prohibition of night work for women.
6. Standards of sanitation and fire protection.
7. Protection against overfatigue and industrial diseases.
8. Prohibition of tenement-house labor.
9. Exemption from the call into industry of women having small children needing their care.
10. Exemption from the call into industry of women 2 months before and after childbirth.

The Convention also recommended that power of full inspection on Government contracts be granted the Labor Department, and that Federal, State and city employment agencies be perfected.

War Department. Chief of Ordnance, General Orders No. 13.

These orders were issued November 15, 1917, and the Quartermaster General issued similar standards in Order No. 18. Number 13 states:

> " . . . the pressing argument for maintaining industrial safeguards in the present emergency is that they actually contribute to efficiency. To waive them would be a short-sighted policy, leading gradually but inevitably toward lowered production. This department, procuring war materials in great quantities and of many different kinds, cannot be without interest as to the conditions under which this material is manufactured."

The standards prescribed for women in the Orders include restriction to 8 hours where possible; 1 day's rest in 7 for all workers as an invariable rule; a Saturday half holiday; adequate rest period, time and place for meals; no work to be done in tenements; provision of seats for women; adaption of women's tasks to their strength, and no excessive weights to be lifted by them; women superintendents to oversee the conditions under which women work; proper lighting provisions; adequate control of temperatures; provisions for joint negotiations between employers and employees. As to general workroom conditions, and wages, the Orders provide:

> In workrooms, "existing legal standards to prevent danger from fire, accident, occupational disease, and other hazards, and to provide good light, adequate ventilation, sufficient heat, and proper sanitation should be observed as minimum requirements necessary both to protect the safety and welfare of employees, and to insure economical production."
>
> "Wage standards already established in an industry and in the locality should not be lowered. The minimum wage rate should be made in proper relation to the cost of living, and in fixing them it should be taken into consideration that the prices of necessities of life have shown great increases. . . The standard of wages hitherto prevailing for men in the process should not be lowered where women render equivalent service."

EVIDENCES OF ILL EFFECTS OF RELAXING LABOR STANDARDS 6/

England began by sacrificing all standards in industry in an effort to secure an adequate supply of munitions. Excessive overtime prevailed; 7-day work became the rule; night work for women as well as men was revived after nearly a century of disuse; thousands of emergency orders were issued, relaxing restrictions; many employers assuming labor laws to be in abeyance disregarded all limitations without even securing permits.

For nearly a year conditions were allowed to be thus demoralized, with the results that the supply of munitions lagged dangerously behind the tremendous demand. Workers were exhausted by overwork, and despite their patriotic enthusiasm could not put forth their best efforts. Almost inevitably evidences of industrial unrest appeared. After more than a year of war, it was realized that the Nation could not afford to risk the exhaustion of the existing labor force. The science and experience which in time of peace had built up laws for the welfare of workers were recalled, and a Committee on the Health of Munition Workers was appointed in 1915. Probably nothing that has ever been published has had a more profound influence than the reports of this Committee, which declared that:

> " . . . the munition workers in general have been allowed to reach a state of reduced efficiency and lowered health, which might have been avoided without reduction of output by attention to the details of daily and weekly rests. The signs of fatigue are even more noticeable in the case of managers and foremen, and their practical results are probably more serious than in the case of the workmen." (Memorandum No. 7. Industrial Fatigue and Its Causes.)

Sunday work.—The first memorandum of the Committee had to do with Sunday work, which also was warned against in Memorandum No. 4 on the Employment of Women. Many employers were beginning to see that a 7-day week was false economy. One large firm found that when, after running its plant 7 days a week over a considerable period, the Sunday holiday was restored, without any change in the daily schedule, the men worked a greater number of hours in the 6 days than they had in 7, because of a consequent falling off in the amount of "broken time." As a result of the Committee's investigation and the support which the Ministry of Munitions gave to its findings, Sunday work soon was almost entirely abolished except for occasional repair work. The Committee stated:

6/ See U. S. Bureau of Labor Statistics Bulletin Nos. 219, 221, 223; Great Britain, Report of War Cabinet Committee on Women in Industry, and Health of Munitions Workers Committee Reports, esp. Nos. 1, 2, 4, 5, 7, 12, 18; National Industrial Conference Board, Research Reports on Night Work, and Rest Pauses; Industrial Poisons in the United States, Alice Hamilton, MacMillan Company, New York, 1925.

> "If the maximum output is to be secured and maintained for any length of time a weekly period of rest must be allowed. Except for quite short periods, continuous work . . . is a profound mistake and does not pay — output is not increased." (Memorandum No. 1.)
>
> Women's work and working time.—"The importance to women of a wise limitation of their hours of work and an appropriate distribution of the pauses in those hours can hardly be overstated. The weight of scientific evidence is behind such limitation, and without it health and efficiency cannot be maintained. The history of factory legislation, with its record of the progressive limitation of the working hours of women and girls, affords interesting proof of a growing conviction resulting from experience in the matter."
>
> "Long hours, particularly when they are worked during the night, are perhaps the chief factor in fatigue, and the committee are of opinion that in the interest of output and health alike they should be restricted within proper limits; that there should be suitable pauses for rest during the working period; and that there should be adequate cessation from work at each week end in addition to periodic holidays."
>
> "The week-end rest has been found to be a factor of such importance in maintaining health and vigor that it has been reinstated by employers who had taken it for work at the beginning of the war. The committee are strongly of opinion that for women and girls a portion of Saturday and the whole of Sunday should be available for rest, and that the periodic factory holidays should not, on any account, be omitted."
>
> "Finally, the committee desire to state that, in their opinion, if the present long hours, the lack of helpful and sympathetic oversight, the inability to obtain food, wholesome good, and the great difficulties of traveling are allowed to continue, it will be impracticable to secure or maintain for an extended period the high maximum output of which women are undoubtedly capable." (Above from Memorandum No. 4 on the Employment of Women.)

Overtime.—The Committee directed its attention toward a reduction in overtime. It instituted intensive scientific studies of the exact relation between the volume of production and the period of work. The output of groups of workers, both men and women engaged in light work and in heavy work was followed over periods of from four to six months, during which several changes in working hours were put into effect. (Memorandum No. 12.)

> " . . . flagging output . . . characterizes . . . the last hours of overtime during the day, and it is stated that the disadvantages of the overtime system are being increasingly recognized by employers." (Memorandum No. 4, cit.)

Increased output with shortened hours.--The results of the Committee's investigations, which point to increased output in shorter hours, were further substantiated by detailed studies of fatigue undertaken for the Home Office, finding that the total daily output may be actually diminished by introducing overtime, because increased fatigue affects the production not only of the actual overtime period but of the regular working hours as well. An absolute increase of over 5 percent was effected in the output of one group of workers by reducing their working day by 2 hours. Studies of both individual and group output proved that the interests of production are best served when industrial standards are maintained.

Some of the more striking cases that show definite increases in output with reasonably short hours in British firms in the period under discussion are as follows:

> For women turning aluminum fuse bodies, a "moderately heavy" operation, a decrease of 8.5 percent in weekly hours of work resulted in an increase of 23 percent in hourly output, and of 8 percent in total weekly output.
>
> For women milling a screw thread on fuse bodies, described as "light labor", a considerable reduction of hours showed after 4 weeks, an improvement that maintained itself at a steady level thereafter.
>
> Munition firms decided that longer hours exhaust the women without any corresponding results in output, arranged shifts for shortening the hours. Several employers who were forced to shorten the day because of lighting regulations and for other reasons, found the output undiminished. An Army clothing manufacturer well experienced in times of pressure was satisfied that an extension of the normal workday in the plant would not secure increased output.

Among the important American cases of that period that illustrate the effectiveness of shortened work hours, is that of the Ford Motor Company, which secured greatly increased production with the day reduced from 9 to 8 hours. The Cleveland Hardware Company had a similar experience, securing the greatest production in its history at the time of its mid-winter peak by keeping to regular hours instead of adding an hour's overtime as it had done formerly. The Cloth Craft shops of the Joseph and Feiss Company in Cleveland instituted Saturday closing and before long found production as great in the five 8-hour days as it had been with the extra 4 hours on Saturday.

A tool manufacturer reduced labor turnover, eliminated lost time, and with a reduction of hours of about 9 percent with no reduction in pay, secured an increase in production of 10 percent. The weekly production in one of the worst departments in spite of the shorter hours increased 18.4 percent and in the entire plant 10 percent.

A manufacturer employing over 4,000 men in 7 shoe factories voluntarily made a reduction of something over 5 percent in hours of work, and found an increase in productive unit per employee per day based on pairs shipped.

Night work.—The Committee stated that this is not to be regarded as a good thing in itself and offers the following objections to the system: It is uneconomical. Though wages are paid at a higher rate, the rate of output is generally lower; supervision is frequently unsatisfactory; conditions of lighting are seldom so good as in daytime and make fine work more difficult; workers experience great difficulty in sleeping by day; the unfamiliar meal hour makes it difficult for the workers to consume substantial food, and their digestion is liable to become deranged. (See Memorandum No. 5. Hours of Work.)

Rest pauses.--The value of rest pauses during work periods is stressed in a number of the committee's memoranda. They state:

> "Pauses, well distributed and adapted in length to the needs of women workers, are of the highest value in averting breakdown and in giving impetus to output . . . . many managers believe that 4 hours is the longest period during which a woman can maintain continuous work at full vigor. Within this period a pause of 10 minutes has been found to give excellent results, and where the spell is continued for 5 hours some such pause should certainly be made for a cup of tea or cocoa . . . " (Memorandum No. 4, Cit.)

Industrial poisons.—It is impossible to tell how much illness and death have resulted from the poisons employed in the manufacture of explosives and of the products that have grown out of this manufacture and that employ various chemicals in their processes.

Explosives used for mining and construction operations and in agriculture long have been made in this country, including guncotton, smokeless powder and fulminate of mercury. During 1914-1918 demands for wartime supplies rapidly expanded such industries here. Works were erected to manufacture guncotton, picric acid, TNT, and other high explosives, and for filling shells with such charges. Nor was this a temporary development. Many such plants can be transferred to the making of other products. For example, plants equipped and built to make guncotton may be used to make celluloid and picture film. The great variety of products of the Dupont chemical works is well known. Moreover, in 1914-1918 we learned in this country to distill benzol and toluol (for TNT) and to make carbolic acid, all formerly imported, and of course such manufacture was continued here. In the United States, the number of plants producing chemicals and acids was more than one-fourth greater in 1929 than in 1914. The employment in these chemical and acid works more than doubled from 1914 to 1919; the employment of women in such plants more than tripled from 1909 to 1929.

Much of the work for export was done on the Atlantic seaboard, New Jersey leading among the States. The factories also were situated in Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, Delaware, Maryland, Virginia, and Indiana.

Explosives that involve in their manufacture several poisonous substances include: Guncotton; smokeless powder; picric acid and ammonium picrate; dynamite; TNT; fulminate of mercury; ammonium nitrate; etc. In an investigation of 28 plants making explosives and chemicals published early in 1917, Dr. Alice Hamilton, the outstanding American authority on this subject, found industrial poisoning having occurred to 75 women in the space of about a year, and 2 of these women had died from TNT poisoning. In one plant, making explosives, where unusually careful supervision of the men's health was maintained, the cases of so-called "fume sickness" were said to number almost 500 during 3 months' time.

The difficulty of obtaining full case records, and the difficulty of diagnosis are stressed in this report. Many cases were never recognized, many others were seen by company or insurance physicians unwilling to give information. Often the ordinary physician met a totally new condition, with little in the medical literature to help him, in such occurrences as cyanosis and syncope from nitrobenzol fumes, of toxic hepatitis from TNT, and endemia of the lungs from nitrous fumes, etc. Several of the histories secured of deaths from occupational poisoning show that if the condition had been recognized in the early stages the victim might have been saved.

Medical studies indicate that greater toll of women than of men is taken by some of the industrial poisons, though in some cases this is attributable rather to the fact that the women employed are largely in the younger age groups. In England the mortality from TNT poisoning was greater among women than men, but the greater youth of the women was thought to be a major factor in this. Sulphuric ether, used in the manufacture of smokeless powder definitely appears to cause more suffering to women than to men. The especial ill effects upon women of poisoning from lead long have been known. An investigation of the pottery industry in this country, in which women work at the glazing and decorating of pottery and tiles in the white-ware industry, showed a high rate of lead poisoning among women as compared to men. However, many other causative factors beside sex entered into the disability of women; they were unorganized, underpaid, poorly housed, poorly fed, subject to the worry and strain of supporting dependents on a low wage, while the men were largely organized, made high wages, were sure of their jobs, and lived comfortably.

Standards of women's wages. In periods of the rapid entrance of women into industry, especially in the performance of processes new to them, considerable difficulty is encountered in establishing suitable wage standards. Such was the case in Great Britain in 1914 and the years following. In March 1915, a Treasury Agreement embodied a promise that women employed in war work in substitution for men should receive the same pay.

In September 1915 the Central Munitions Labour Supply Committee was formed of representatives of the Ministry, employers and workers to assist in transference of skilled labor. They created a small wages subcommittee composed of one member of the National Federation of Women Workers and three representatives of the engineering trade. In October they issued a circular containing regulations adopted by the Ministry of Munitions, prescribing a standard time rate for women and providing that "where women are employed on piece work they shall be paid the same piece-work prices as are customarily paid to men for the job." Later policy definitions dealt with wages on work not recognized as men's; with overtime, night work, premium bonus, piece-work prices. Much controversy arose over the effort to have some satisfactory provision made for progress of women on time to the fully skilled tradesmen's rate, nor for rates where women were employed on only part of the process performed by men.

In 1919, a Comprehensive Report on Women in Industry, issued by the British War Cabinet, embodied the following recommendations among others:

> "That the relative value of the work done by women and men on time on the same or similar jobs should be agreed between employers and trade unions acting through the recognized channels of negotiation, as, for instance, Trade Boards of Joint Industrial Councils.
>
> "That in every case in which the employer maintains that a woman's work produces less than a man's, the burden of proof should rest on the employer, who should also have to produce evidence of the lower value of the woman's work to which the fixed sum to be deducted from the man's rate for the particular job throughout the whole of the industry should strictly correspond.
>
> "That the employment of women in commercial and clerical occupations especially requires regulation in accordance with the principle of 'equal pay for equal work.'
>
> "That the Government should support the application to industry of the principle of 'equal pay for equal work' by applying it with the least possible delay to their own establishments, and that as soon as any relation between the wages of men and women in any occupation or job has been agreed between employers and trade unions acting through the recognized channels of negotiation, the maintenance of that relation should be a condition of any Government contract involving the employment of workpeople in that occupation or job.
>
> "That in order to secure and maintain physical health and efficiency no normal woman should be employed for less than a reasonable subsistence wage.
>
> "That this wage should be sufficient to provide a single woman over 18 years of age in a typical district where the cost of living is low with an adequate dietary, with lodging to include fuel and light in a respectable house not more than half an hour's journey, including tram or train, from the place of work, with clothing sufficient for warmth, cleanliness and decent appearance, with money for fares, insurance and trade-union subscriptions, and with a reasonable sum for holidays, amusements, etc."

The Minority Report of the Report on Women in Industry of the British War Cabinet included the following recommendations and statements among others:

> "That the popular formula of 'Equal Pay for Equal Work', or, more elaborately, 'Equal Pay for Work of Equal Value in Quantity and Quality', whilst aiming at the expression of the right ideal, is so ambiguous and so easily evaded as not to constitute any principle by which the relation between men's and women's wages can be safely determined.
>
> "That the essential principle which should govern all systems of remuneration, whether in private industry or in public employment, in manual working as well as brain working occupations, is that of clearly defined Occupational or Standard Rates, to be prescribed for all the persons of like industrial grade; and, whether computed by time or by output, to be settled by collective agreement between representative organizations of the employers and the employed; and enforced, but as minima only, on the whole grade or vocation. There is no more reason for such Occupational or Standard Rates being made to differ according to the workers' sex than according to their race, creed, height, or weight.
>
> "That this pledge [The Treasury Agreement of March 1915] was applicable without exception to all kinds of war work, whether done by contractors or in any Government Department, to all degrees of skill, and to all methods of computing wages, including time, piece and premium bonus, and to allowances and advances.
>
> "That no Government Department has carried out the pledge in its entirety. All of them (including the Ministry of Munitions) have failed in two points of first-rate importance, affecting many thousands of women, namely: —
>
> "(a) Where women have been employed at time-rates they have — with the curious exception of women taking the place of skilled men within the sphere of the Ministry of Munitions — been denied the same pay as the men they have replaced.
>
> "(b) But the most flagrant breach is the repeated refusal of all the Government Departments to concede to the women employed in substitution for men, whether skilled or unskilled, whether at piece work, the premium bonus system, or time wages, the successive advances granted to the men doing similar work — thus failing to carry out not only the Treasury Agreement, but also the interpretation authoritatively given by Mr. Lloyd George on 26th March, 1915 (which is accepted in the Majority Report as being an independent pledge by which the Government is bound) "that if the women turn out the same quantity of work they will receive exactly the same pay."

ADVANCE IN LEGAL STANDARDS FOR WOMEN'S WORK 7/

The progress since 1918 in fixing standards for women's work indicates the increased understanding of the actual business effectiveness of better working conditions. It also indicates the importance of maintaining and extending the standards found to be more efficient. A comparison of 1918 with the present shows:

	Number of States having such laws	
	1918	1940
8-hour day, 48-hour week or less (some occupations)............	3	19
8-hour day (some manufacturing)..	6	15
Minimum-wage laws................	12	26
Regulation of industrial home work	13	18

7/ See Women's Bureau bulletins No. 16 and No. 66-II for earlier laws; and for present laws 156, parts I and II, and 167 with supplement.

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

WOMEN AVAILABLE FOR DEFENSE WORK

Women available for defense work include—

1. Experienced workers seeking jobs.
2. Workers on W.P.A. who may be further trained for defense work.
3. Workers now employed in jobs less skilled than they have done or can be trained for.
4. Women not previously in the labor market.

The following pages show the numbers of women—

1. Available from employment rolls for certain types of defense work.
2. W.P.A. workers who may be useful in defense.

Prepared October 1940

(2307)

U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

WOMEN AVAILABLE FROM EMPLOYMENT ROLLS FOR CERTAIN TYPES OF DEFENSE WORK

The following lists show the numbers of women seeking employment in various defense industries, in 14 major industrial States in April 1940, the latest figures of the Bureau of Employment Security that are by occupation and sex. 1/ The occupations of the women seeking metal factory work are shown on the next page.

1. For Metal Factory Work

Connecticut	1,759
Michigan	1,658
New York (total)	1,521
Buffalo	407
New York City area	299
Syracuse	279
Rochester	68
Illinois	1,238
Ohio	1,107
New Jersey	1,097
Indiana	479
Pennsylvania	368
Massachusetts	327
Wisconsin	212
Missouri	150
Rhode Island	124
Maryland	123
California	103
Minnesota	73

ovr 10,000

2. For Electrical Supply Factory Work

New Jersey	2,106
New York (total)	1,572
New York City area	632
Buffalo	487
Rochester	257
Syracuse	38
Illinois	1,287
Ohio	889
Massachusetts	857
Connecticut	832
Michigan	795
Pennsylvania	668
Indiana	533
Wisconsin	268
Rhode Island	207
Missouri	199
California	69
Maryland	48
Minnesota	24

ovr 12,000

3. For Work on Transportation Equipment

Illinois	549
Michigan	529
Indiana	237
Ohio	176
New York	75
New Jersey	68
Pennsylvania	33
Massachusetts	21
Connecticut	3

4. For Work in Chemical Plants

New York (total)	214
New York City area	170
New Jersey	162
Pennsylvania	28
Illinois	25
Ohio	23
Michigan	23
Massachusetts	22
Connecticut	14

5. For Work on Watches and Clocks

Rhode Island	1,192
New York (total)	424
New York City area	345
Rochester	76
Massachusetts	308
Illinois	135
Connecticut	150
New Jersey	129
Pennsylvania	21

1/ Regular reports from States to the Bureau do not designate the specific occupations; such a report is only by special request. Prior to April 1940 the last such request was in 1938. Recent monthly figures are not by sex.

TYPES OF METAL-WORK OCCUPATIONS FOR WHICH WOMEN ARE AVAILABLE FROM EMPLOYMENT ROLLS
4 REGIONAL GROUPS OF STATES

Occupations	Ohio Indiana Illinois Missouri	New York Pennsylvania New Jersey Maryland	Massachusetts Rhode Island Connecticut	Michigan Wisconsin Minnesota
Total 1/	2,974	3,109	2,210	1,943
Rolling, stamping	1,010	948	550	1,121
Machine shop, n.e.c.	369	533	186	363
Fabrication, n.e.c.	414	447	294	84
Welders, flame cutters	104	93	13	67
Machinists	202	133	159	29
Filers, grinders	116	131	53	54
Foundry, n.e.c.	100	83	11	104
Furnacemen, smelters	5	21	1	1
Toolmakers, diesinkers	3	7	4	2
Blacksmiths, forgemen	6	9	1	3
Tinsmiths, coppersmiths	1	8	4	2
Molders	1	10	---	---
Heat treaters, annealers	5	1	2	2
Ore dressers	---	1	1	1

10,236

1/ Total exceeds details. Each State had a group of "inter-industry occupations" in metal work.

WOMEN W.P.A. WORKERS WHO MAY BE USEFUL IN DEFENSE WORK

Some figures have been collected to give an idea as to women on W.P.A. projects who may be useful in defense industries, especially with additional training. The attached tables show (1) numbers of power sewing-machine operators in various States, and (2) where W.P.A. workers on selected projects were located in the 19 States reporting largest numbers.

The operation of power sewing machines probably is the most similar to types of factory employment for which women could be trained in defense industries. The W.P.A. reported 17,230 workers operating such machines in December 1939. Of these about 3,200 worked on high-speed machines. (A few States have given reports on this subject for later dates.)

Workers on other types of projects that may be useful in certain kinds of defense work, as reported by the W.P.A. at the end of May 1940, include 7,500 doing public health and hospital work, 3,500 distributing surplus commodities, 6,600 at work on other production projects, 21,200 at work on school-lunch projects, 17,600 engaged in education, and 23,900 doing work on various types of research, records, and surveys. Obviously these numbers are changing frequently. There is some indication they are growing smaller as more persons are absorbed into private employment.

State reports sent to the W.P.A. show only the State totals on such projects. In order to obtain further information as to where these women were located, the Women's Bureau, at the suggestion of the W.P.A., wrote to W.P.A. directors in the States that had reported the largest numbers on professional and service projects.

TABLE I.—WAGE WORKERS ON SEWING PROJECTS WHO OPERATED POWER MACHINES

Reported by W.P.A. as of December 20, 1939

Administrative Region and State	Total	Low speed—31-15, 61W, and others	High speed	Chief location (city)
CONTINENTAL UNITED STATES	17,230	14,031	3,199	
REGION I - TOTAL	1,132	1,022	110	
Connecticut	3	---	3	New Haven
Maine	30	30	---	
Massachusetts	1,014	935	79	Not reported
New Hampshire	38	38	---	
Rhode Island 1/	45	19	26	1/
Vermont	2	---	2	2/
REGION II - TOTAL	3,338	2,279	1,059	
New Jersey	232	232	---	
New York City	1,895	1,177	718	
New York State	476	454	22	2/
Pennsylvania	735	416	319	Not reported
REGION III - TOTAL	47	36	11	
Delaware	---	---	---	
District of Columbia	14	14	---	
Maryland	11	1	10	2/
Virginia	5	4	1	Not reported
West Virginia	17	17	---	
REGION IV - TOTAL	6,443	5,658	785	
Illinois 3/	2,424	2,300	124	3/
Indiana	249	238	11	Indianapolis Evansville
Michigan	1,116	1,035	81	Not reported
Missouri	227	196	31	St. Louis
Ohio 4/	2,427	1,889	538	4/
REGION V - TOTAL	499	457	32	
Alabama	111	96	16	Not reported
Florida	49	45	4	Not reported
Georgia	---	---	---	
Kentucky	72	70	2	Not reported
North Carolina	245	236	9	Durham
South Carolina	---	---	---	
Tennessee	17	16	1	Nashville

Footnotes on next page.

TABLE I, page 2

Administrative Region and State	Total	Low speed— 31-15, 61W, and others	High speed	Chief location (city)
REGION VI - TOTAL	312	300	12	
Arkansas	---	---	---	
Louisiana	306	300	6	Not reported
Mississippi	5	---	5	Not reported
Oklahoma	---	---	---	
Texas	1	---	1	Houston
REGION VII - TOTAL	3,173	2,587	586	
Iowa	520	477	43	Des Moines
Kansas	144	101	43	Not reported
Minnesota	1,286	953	333	Minneapolis St. Paul Duluth
Nebraska	477	397	80	Not reported
North Dakota	160	160	---	
South Dakota	17	15	2	2/
Wisconsin	569	484	85	Not reported
REGION VIII - TOTAL	1,260	1,172	88	
Colorado	703	640	63	Not reported
Montana	435	428	7	2/
Idaho	5	---	5	2/
New Mexico	---	---	---	
Utah	108	104	4	2/
Wyoming	9	---	9	2/
REGION IX - TOTAL	1,026	510	516	
Arizona	46	44	2	2/
Northern California 5/	357	87	270	5/
Southern California 5/	293	134	159	5/
Nevada	---	---	---	
Oregon	278	244	34	2/
Washington	52	1	51	Not reported

1/ Rhode Island reports for June 30, 1940, show 637 on power machines, largely in Providence, Woonsocket, Pawtucket.

2/ Not ascertained.

3/ Illinois reports for June-July 1940, 1,800 on power, 1,377 on treadle machines, chiefly in Chicago, Rockford, Herrin, and Peoria. (Total, 3,177.)

4/ Later Ohio reports show no high-speed operators; other power sewing machines, 1,878 in May, 1,613 in July 1940; the largest numbers were in Cleveland, Columbus, Akron, Cincinnati, Toledo.

5/ California reports for May 1940 show on high speed Northern 450, Southern 179; on other power Northern 2,750, Southern 77. Chief numbers in South were in Los Angeles; in North in San Francisco, Oakland, Santa Rosa, Fresno. (Total, 3,456.)

Women's Bureau, U. S. Department of Labor, Washington

TABLE II.—NUMBER OF WOMEN REPORTED ON SELECTED W.P.A. PROJECTS

(All figures as reported by the W.P.A.) 1/ 2/ (Includes 19 States with largest numbers reported in May 1940)

	All projects 2/	Production projects (Except sewing)	Sewing projects		School lunches	Distribution of surplus commodities	Public health & hospital work	Research and surveys (Inc. pub. and hist.records	Education
			Total	Machine operators 3/					
Pennsylvania 1/	27,677	29	19,193	4/ 735	32	447	4/ 450	1,435	963
Philadelphia	6,977	---	5,791	---	---	71	87	909	117
Allegheny	3,063	---	2,637	---	---	137	18	140	131
Luzerne	1,425	---	1,249	---	---	29	23	37	87
Lackawanna	1,162	---	892	---	---	20	40	20	90
Illinois 1/	26,704	618	8,264	5/3,177	1,687	384	1,486	2,806	1,462
Chicago	12,358	361	4,308	1,211	245	302	1,010	2,453	513
Ohio 1/ 6/	21,585	---	9,823	6/2,427	1,576	187	570	1,576	765
Cleveland	5,278	---	2,408	---	259	85	252	729	157
Toledo	1,677	---	811	---	207	36	56	80	54
Cincinnati	1,885	---	1,082	---	104	---	89	80	74
Akron	1,646	---	532	---	225	22	27	126	73
Columbus	1,353	---	529	---	88	18	131	122	46
Youngstown	1,031	---	323	---	117	2	---	48	24
Texas 1/	20,912	554	7/12,081	1	876	171	7/ 270	793	1,017
Fort Worth	1,259	65	671	---	2	4	---	63	58
Houston	1,131	16	346	1	44	14	26	87	31
San Antonio	1,121	10	225	---	16	8	69	145	68
Dallas	846	---	416	---	2	9	---	80	47
Waco	507	54	283	---	4	14	---	1	18
New York									
New York City 1/	13,465	42	1/ 1,877	1,895	1,307	43	1,387	2,283	1,520
State(except city)1/	4,486	---	3,490	476	17	---	11	175	407
California 1/	16,605	372	8/5/7,480	5/3,456	1,011	195	5/ 449	986	1,055
Southern	N.R.	134	2,934	256	250	105	162	144	469
Los Angeles	2,362	11	1,018	153	165	56	130	100	309
San Diego	716	45	419	2	24	10	30	27	56
San Bernardino	651	---	457	91	6	15	1	---	28

(See page 3 for footnotes.)

TABLE II, page 2

	All projects 2/	Production projects (Except sewing)	Sewing projects		School lunches	Distribution of surplus commodities	Public health & hospital work	Research and surveys (Inc. pub. and hist. records)	Education
			Total	Machine operators 3/					
California (cont'd)									
Northern	9,779	---	4,546	3,200	450	89	287	653	437
San Francisco	3,031	---	1,492	1,010	42	62	198	240	217
Oakland	2,487	---	977	840	---	2	89	81	108
Massachusetts 1/	13,092	267	7,213	1,014	347	231	173	1,423	539
Michigan 1/	10,405	169	5,301	1,116	562	37	42	980	521
Missouri 1/	9,813	418	4,884	227	9/ 810	32	477	699	400
St. Louis	N.R.	---	---	131	---	---	291	203	103
Kansas City	N.R.	---	---	96	---	---	46	311	89
New Jersey 1/	9,714	180	3,657	232	437	36	10/273	1,222	468
Essex	1,928	48	794	---	41	10	44	211	67
Hudson	1,689	44	743	---	79	2	---	315	108
Passaic	862	4	395	---	28	2	59	71	36
Atlantic	850	23	366	---	54	4	---	13	42
Camden	738	33	212	---	77	---	---	161	11
Bergen	763	4	224	---	28	---	4	85	65
North Carolina 1/	8,532	298	3,281	245	1,023	231	28	395	484
Georgia 1/	7,660	224	11/3,130	---	1,081	97	187	544	635
Atlanta	1,595	18	787	---	104	12	125	185	84
Virginia 1/	6,680	381	2,708	5	640	40	297	499	355
Oklahoma 1/	6,549	---	2,833	---	736	172	---	267	197
Oklahoma City	495	---	240	22	11	20	---	122	58
Mississippi 1/	6,366	129	2,180	5	1,385	122	37	619	404
South Carolina 1/	6,323	457	1,840	---	1,195	58	129	104	381
Richland	591	83	133	---	29	7	20	31	36
Greenville	558	67	191	---	80	5	46	14	16

(See page 3 for footnotes.)

TABLE II, page 3

	All projects 2/	Production projects (Except sewing)	Sewing projects		School lunches	Distribution of surplus commodities	Public health & hospital work	Research & surveys(Inc. pub.& hist. records)	Education
			Total	Machine operators 3/					
Florida 1/	6,138	458	2,857	49	518	109	148	349	324
Hillsboro	1,288	88	851	---	73	12	64	40	27
Duval	748	80	179	---	19	26	19	64	64
Alabama 1/	6,083	624	1,751	111	341	101	164	358	597
Birmingham	N.R.	326	331	111	111	40	104	231	115
Indiana 1/	6,035	21	3,156	249	---	64	92	168	231
Indianapolis	1,178	2	329	80	34	27	17	69	52
Evansville	620	---	451	62	6	2	---	12	27

1/ Totals for State (or major area) shown as reported by W.P.A. for May 1940. Numbers operating sewing machines shown as reported by W.P.A. for December 1939. Details as to localities shown as reported by State administrators of W.P.A., chiefly for May 1940.

2/ Total for State (or major area) usually exceeds details listed here.

3/ Details as to high-speed machines shown in Table I.

4/ Over 450 in sewing each in Westmoreland, Fayette, Northumberland, Washington, Schuylkill; 48 health and hospital in Schuylkill.

5/ Figures for May 1940 as totaled from reports by locality (see footnote 1); in Illinois 1,800 on power, 1,377 on treadle machines, over 300 in each city Herrin, Rockford, Peoria.

6/ Chief city listed, though area reported includes county. More than 100 housekeeping aides in May each in Cleveland, Cincinnati, Columbus, Akron, Canton, Youngstown, Warren, Zanesville. All W.P.A. numbers declined May to July. Later figures on sewing show no high-speed machine operators, total on machines in May, 1,878; in July, 1,613; in May, Cleveland 650, Columbus 370, and over 250 each in Cincinnati, Youngstown.

7/ On sewing 100 or over each in El Paso, Austin, Amarillo, 25 to 40 health and hospital in El Paso, Amarillo.

8/ More than 100 each on sewing projects in South: Long Beach, Riverside, Pasadena, Anaheim, Santa Ana; North: Stockton, Fresno, San Jose, Sacramento, Bakersfield.

9/ School lunch in Dunklin, Pemiscot (extreme southeast).

10/ In health and hospital 45 to 30 in Mercer and Monmouth.

11/ More than 100 on sewing each in Macon, Decatur, Savannah, Marietta, or their counties. Health and hospital 32 to 20 in Columbus, Macon.

U.S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

PROCESSES ON WHICH WOMEN ARE NOW AT WORK IN DEFENSE INDUSTRIES

Airplane Factories

Plants Making Instruments

Electrical Products Plants

Machine Tool Factories

Gun and Ammunition Plants

Other Metal and Electrical Supply Manufacturing

October 1940

U.S. DEPARTMENT OF LABOR
WOMEN'S BUREAU
Washington

PROCESSES ON WHICH WOMEN ARE NOW AT WORK IN DEFENSE INDUSTRIES

October 1940

Considerable numbers of women are at work on various types of jobs in some 25 aircraft plants, instrument manufacturers, machine shops, and ammunition factories in the northeastern part of the country, visited by the Women's Bureau. Additional kinds of work well might be done by women in the drafting, machining, assembling, inspecting and production departments of the plants.

The oversupply of male labor in the past years has delayed the development of jobs for women in aircraft factories, though in some European plants it is reported that women comprise a large share of the personnel. Several of those interviewed felt that women's usefulness in the metal trades and defense industries and their opportunities for employment would be greater if they had vocational training in interpretation of blue prints and mechanical drawing, shop mathematics, the use of measuring gauges, nature and sensitivity of metals, and the applications and use of light machines.

The instrument field for aircraft is a relatively new and developing one. The airplane of today has many instruments and meters. There are fuel and oil gauges, rate-of-climb indicators, turn and bank indicators, speed indicators, clocks, compasses, altimeters, air and oil temperature indicators, tachometers, voltmeters, synchronizers, automatic gyroscope pilots and others. Instrument workers must be able to work on small parts and have ability for careful work and appreciation of fine mathematical tolerances. Many of the instrument workers at the present time have been watchmakers. This seems a field for which women could be trained and for which their apprenticeship and participation could be extended.

AIRPLANE FACTORIES

The manufacture of airplanes usually spreads itself over several specialized types of establishments. The fuselage, wings, aelerons, rudders, engine mounts, elevators, stabilizers and the final assembly of the planes is carried on in the body plants.

New designs, changes in engineering practices, new materials and other changing developments have retarded standardization and the manufacture of interchangeable parts. Machines, dies, shop equipment and layout have not yet reached an assembly line set up. Tolerances for error have been slight and because of lack of standardization, the number of repetitive jobs has been limited with a resulting tendency to use skilled all-around mechanics to a large extent. This has limited the field for women.

Work Women Are Doing.

Very small numbers of women were found in a body plant in the paint shop where doping of wings is carried on, but this process is done only to a limited extent; and in the upholstery department, but bombing planes have no upholstery. In plants making engines and parts some women were at work, inspecting small parts; cleaning by dipping metal parts in vats containing a soda solution to remove grease; and etching identification numbers on small parts with an electric needle, in a few cases using a pantograph for this, in a few others operating a multiple electric needle - 15 needles with a foot control. Most numerous were the inspectors, and this generally was more than a simple visual task since blueprints were used and all parts were inspected to close degrees of tolerance.

In inspecting pipes, tubes, and small parts for engines, women were using scales, length gauges, snap gauges, ring gauges, plug gauges, go-no-go gauges, etc. Gears were inspected visually with gauges; spark plugs were checked for leakages with the use of electric indicators; weight and diameter of pistons was checked with close tolerances; all parts purchased or made elsewhere were closely inspected with hardness testing devices, verniers, Rockwell and Schore testing indicators; stiffness of springs was tested with special indicator; some of the parts to be inspected were projected by shadowgraph to insure more accurate work.

Work Women Could Do.

Bench work such as burring, filing, soldering, welding, assembling with mechanical screw drivers, arbor presses, cleaning with compressed air, etc.;

Drill press operations - using sensitive drills, single and multiple jig drilling;

Grinding - wet grinding on small parts, for which women would need more training and skill than for bench work and drilling, including a working knowledge of shop mathematics, ability to read blueprints, familiarity with precision methods and standards.

Drafting room - general assisting, but this requires considerable training if the work is from original job specifications, and it probably would not be feasible to give such training in times of peak production; also, plenty of older men are available for draftsman vacancies.

Polishing and light buffing.

Welding - both electric and acetylene on small parts.

PLANTS MAKING INSTRUMENTS

These employ many women in various processes. Women work in small numbers in the drafting room doing some scale drawing, tracing, and serving as general assistants; draftsmen are men with engineering training.

A few women production clerks route orders and keep stock records. Most of the women are on bench work assembling parts with riveting presses, arbor presses, automatic screw drivers, soldering, electric spot welding of wires, and other light jobs involving the winding and cutting of wires. Some of this work is fine and requires close attention as well as finger dexterity. In one plant women operate small automatic screw machines of turret lathe type, which are set up and adjusted by men. A number of women operate small sensitive drills of the bench type, some do multiple jig drilling on metal and bakelite parts, and some do counter sinking on small parts. Other machine jobs are tapping and grinding pivot points. Radium painting of dials for instruments is the occupation of a small group, protected by glass shielded exhaust boxes. In plating departments women hang parts on racks and remove them after the plating operation is completed, a job formerly done by men. Women are employed quite extensively on inspection of incoming, in-process, and completed parts. The work of the inspectors requires checking with blueprints, use of micrometers, calipers, microscopes, and a variety of small gauges. Other jobs are the calibrating of instruments and balancing of instruments which requires considerable skill and attention to detail; hand polishing and finishing some parts with fine emery paper, cloths and abrasives; and packing small parts and instruments. Winding armatures and coil winding are principal occupations of women in one plant, a type of work done by women in electrical manufacturing.

ELECTRICAL PRODUCTS PLANTS

In electrical supply manufacturing women have long been at work on various light assembly and inspection jobs. Winding coils and armatures is important in the electrical plants. Also, there seems less opposition in electrical than in some of the metal plants to the idea of trying out women on new jobs when defense contracts are in full swing, and the general feeling seemed to be that women's occupations both as machine operators and inspectors would be extended.

Work Women Are Doing.

Bench assembly, all light work, using ordinary bench hand tools such as pincers, mechanical screw drivers, small arbor presses, etc.;

Machine screwing on a screw assembly machine which automatically inserts screws;

Assembling lamp sockets with mechanical screw drivers;

Taking off insulation for stator connections;

Winding wire for field coils on machines. Reported that three weeks were usually required to learn job;

Winding, soldering and testing armatures both by hand and machine;

Drilling - women operate all types of drills up to one-quarter inch, and women reported as especially good on jig drilling. Elsewhere women operate three-quarter inch drills. They operate both multiple and single drills.

Punch press operators - women sometimes work on fairly large presses, and in some cases use tongs or pincers to feed. Elsewhere women are on light kick presses.

A small proportion of women are tapping, buffing, burnishing, and a few are milling.

Soldering - women are especially adept on soldering. However, it takes three to six months to develop all-around skill on this and schools could give instruction to women on this phase of the work.

Lapping - polishing or smoothing rods to a close tolerance on a revolving spindle. Tolerance 1/1000 of an inch. Check with Hirsch minimeter. In at least one of the plants visited, women have developed a sensitivity that is of a high degree on this, and boys are not considered nearly as good.

Inspection - large numbers of women are on the inspection of parts throughout this industry. Inspection may be visual and with the use of indicators and gauges, such as snap, go-no-go, etc.

A small proportion of women are doing spray lacquering.

Filing - hand burring and filing of gyroscope parts.

Work Women Could Do.

If the defense emergency reduces the number of men available materially, women could be used much more extensively on many light machines, bench lathes, repetitive milling machine operations, welding, tool cribs, drafting helpers. More women could be used on drill presses and on some of the heavier assembly jobs without the work being too strenuous for women. Boys were on arbor press assembly as well as women and were operating riveting machines and doing light wet grinding, which could be done by women. Men were testing the resistance of springs with indicators and this seemed a woman's job possibility.

MACHINE TOOL FACTORIES

A few women are in these factories, and more can be so employed. Women are doing bench work, inspecting, light machine work, wrapping and winding coils, and packing.

GUN AND AMMUNITION PLANTS

In the shell divisions women are employed largely as inspectors and as tenders of machines which draw the cups for the shells. Inspection is visual with occasional use of gauges, and work on drawing machines is simple so little training is required. Women assemble some types of shells and spray guns with lacquer. Women are employed on punch press operations and assembly on other non-defense products.

OTHER METAL AND ELECTRICAL SUPPLY MANUFACTURING

A miscellaneous group of plants manufacturing sewing machines, needles, electric motors, electric fans, vacuum cleaners, storage batteries, magnetoes, springs, machinery parts, fuses, air manifolds, pumps, and toy trains, were visited. Machines which were being successfully operated by women were drill presses of all kinds - sensitive, jig and counter sinking, tapping machines, small and medium sized punch presses, riveting presses, machines moulding bakelite parts, specialized machines for the milling, punching, grinding, polishing and packing of needles, wire winding machines and other small machines of a specialized type. Women were doing a variety of bench work operations preparing work for processes, cleaning, assembling with the use of hand tools and automatic screw drivers, hand filing, burring, and light grinding. Large proportions were inspecting and a few were acting as drafting assistants and production clerks. An official of one plant in this group which did not employ women reported that if their production increased materially that he felt women might be used successfully on many of their drilling, grinding, tapping, assembly and inspection operations.

STATISTICAL DATA – World WAR II

CONTENTS OF THIS FOLDER

1. Regional list - regions and states within each region
2. Regional offices established in Defense Manpower Administration (States alphabetically arranged)
3. War Industry Plant Schedule Form (#2500)
4. Number of plants, by Region and State, surveyed by Women's Bureau 8/40 - 5/45
5. Number of plants, by Industry, surveyed by Women's Bureau 8/40 - 5/45
6. Alphabetical listing of 508 War Industry Plants scheduled by Women's Bureau during Defense Period prior to and during World War II
7. Community Studies, listed by State, made by Women's Bureau during World War II
8. Subjects in "Old Source Book"
9. Subjects in "General Source Book" and "Special Industries Source Books"
10. List of publications of Women's Bureau, 1918 to February 1943.

NOTE: Also available in Statistical Branch -

1. List of 508 War Industry Plants, by Industry, showing location and date of survey
2. List of 508 War Industry Plants, by Region and State, showing location, product, and date of survey

/

6/25/51

Regional list - regions and states within each region

Region I
- Maine
- New Hampshire
- Vermont
- Massachusetts
- Connecticut
- Rhode Island

Region II
- New York
- New Jersey

Region III
- Pennsylvania
- Delaware

Region IV
- Maryland
- West Virginia
- Virginia
- North Carolina
- District of Columbia

Region V
- Tennessee
- Mississippi
- Alabama
- Georgia
- South Carolina
- Florida

Region VI
- Ohio
- Kentucky
- Michigan

Region VII
- Wisconsin
- Illinois
- Indiana

Region VIII
- Minnesota
- North Dakota
- South Dakota
- Montana

Region IX
- Iowa
- Missouri
- Nebraska
- Kansas

Region X
- Arkansas
- Louisiana
- Oklahoma
- Texas

Region XI
- Wyoming
- Utah
- Colorado
- New Mexico

Region XII
- California
- Nevada
- Arizona

Region XIII
- Washington
- Oregon
- Idaho

REGIONAL OFFICES ESTABLISHED IN THE DEFENSE MANPOWER ADMINISTRATION
(Alphabetical)

March 10, 1951

States Covered:	Region
Alabama	V
Arizona	XII
Arkansas	X
California	XII
Colorado	XI
Connecticut	I
Delaware	III
District of Columbia	IV
Florida	V
Georgia	V
Idaho	XIII
Illinois	VII
Indiana	VII
Iowa	IX
Kansas	IX
Kentucky	VI
Louisiana	X
Maine	I
Maryland	IV
Massachusetts	I
Michigan	VI
Minnesota	VIII
Mississippi	V
Missouri	IX
Montana	VIII
Nebraska	IX
Nevada	XII
New Hampshire	I
New Mexico	XI
New Jersey	II
New York	II
North Carolina	IV
North Dakota	VIII
Ohio	VI
Oklahoma	X
Oregon	XIII
Pennsylvania	III
Rhode Island	I
South Carolina	V
South Dakota	VIII
Tennessee	V
Texas	X
Utah	XI
Vermont	I
Virginia	IV
Washington	XIII
West Virginia	IV
Wisconsin	VII
Wyoming	XI

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Area Outline-2500
War Industry Plant

U. S. Department of Labor
WOMEN'S BUREAU
Washington

Date____________________
Agent____________________

1. Firm name and address.

2. Persons interviewed and positions.

3. Product
   (a) Prior to War
   (b) War product

4. Employment: (Where obtainable, secure detailed breakdown).

(a)

Present force	Total	Men	Women
Total			
Factory			
Office			
Others(explain)			

Factory - all factory workers, productive and non-productive. Non-productive includes maintenance, shipping, warehousing, power plant and plant clerical.

Other -- executive, managerial, technical, professional.

(b) Anticipated changes in total numbers and number or proportion of women.

5. Hours of work.

(a)

Scheduled hours	Plant		Office
	MEN	WOMEN	WOMEN
Daily			
Weekly			
Days per week			

(b) Shifts (1) Beg._____ End______ No. Men______ Women______
(2) Beg._____ End______ No. Men______ Women______
(3) Beg._____ End______ No. Men______ Women______

Notes on irregularities in hours and shifts.

(c) Practice regarding rotation of shifts.

(d) Overtime (time more than scheduled hours) - extent, jobs affected.

(e) Lunch period, by shifts.

(f) Rest periods - formal or informal. If formal, number and length of periods.

(g) Daily and weekly hours - discuss any changes in hours as from 3-8 to 2-9 hour shifts, reasons for change and effect on production, absenteeism.

6. Absenteeism by sex. Period covered, rate, reasons for absenteeism, methods of reducing. Does absenteeism include total absences, or are vacations, lay offs, and excused absences excluded?

7. Turn-over, by sex - see absenteeism. Also describe exit interviews.

8. Rates of pay.
   - (a) Beginning minimum hourly rate (plant operative) for men and women - explain fully.
   - (b) Prevailing rate for women (plant operative) - explain fully.
   - (c) Beginning and prevailing rate for women office workers.
   - (d) Shift differential.

9. Equal pay policy.

10. Wage systems. (Whenever available, rates of pay by sex and occupation, should be listed separately.)
    - (a) Method or basis of pay - time, place, production bonus, etc.
    - (b) Wage progression
      - (1) Automatic
      - (2) Merit systems
      - (3) Job upgrading - describe fully, noting also variations by sex.

11. Labor supply - by sex
    - (a) Source - area and nature
    - (b) Adequacy
    - (c) Methods of hiring and recruitment

12. Training
    - (a) For new and inexperienced women workers
      - (1) On the job only. Describe briefly.
      - (2) Other. Describe fully.
    - (b) Other training for women. J.I.T., J.R.T., E.S.M.D.W.T. (Job Instructor) Training, Job Relations Training, Engineer, Science, Management War Training) 1/

13. Personnel pollicies and practices
    - (a) Method of selection, induction, and orientation of new women employees.
    - (b) Age. (If obtainable, secure age distribution by sex.)
      - (1) Minimum and maximum, by sex.
      - (2) Reasons for preferred age groups (women).
      - (3) The older woman worker.
    - (c) Working mothers with children under 16.
    - (d) Pregnant women- job or shift transfers, time off, and other practices.
    - (e) Race - non-white women.
    - (f) Handicapped women employees.

1/ Sponsored by War Manpower Commission.

- (g) Women in employee relations as shop counselors and personnel directors.
  - (1) Background as to education, training and experience.
  - (2) Functions and authority.

14. Medical facilities
    - (a) Pre-employment examination. Describe and indicate use.
    - (b) Medical facilities by shift.
    - (c) Functions of the medical department.

15. Food services and facilities, by shifts, by race, by factory and office.

16. Work clothing requirements and practices of women.
    - (a) Describe and note whether provided or sold by plant.
    - (b) Compliance and enforcement of safety clothing standards.

17. Women's jobs
    - (a) List of jobs.
    - (b) Describe and comment fully on suitability of new or unfamiliar jobs and unusual circumstances surrounding old jobs.
    - (c) Engineering and other plant changes made for more effective employment of women.
    - (d) Job rotation to reduce monotony and fatigue and increase production.

18. Employee organization and affiliation.
    - (a) Provisions affecting women's employment.
    - (b) Women's participation and contribution to labor management committees.

19. Part time employment - number of women, type of worker, jobs, hours (begin and end), rate, comments on value of part time to offset labor shortage.

20. Home work - number of women employed. Comparison of plant and home work rates and kind of work.

21. Employee Welfare - (plant policy).
    - (a) Transportation
    - (b) Child care
    - (c) Housing
    - (d) Other

22. Special strains, hazards, for women and accident severity and frequency rate for men and women.

23. Post-war plans in relation to women's employment.
    (a) For plant conversion

    (b) For worker transition

    (c) Indications as to job possibility for women

        (1) As to proportions to retain job.
        (2) As to chances for women to hold on to better paid job.

Note: Where women have been introduced into plants recently, observe carefully and describe adequacy of plant facilities - washing facilities, toilets, drinking facilities, cloak and change rooms, seating, rest rooms. This will be a separate section.

If report is typed, send into office one carbon with original.

4

August 16, 1951

Number of Plants by Region, and State -

Surveyed by Women's Bureau 8/40-5/45

(List of individual plants by region and state showing location, product and date of survey is available in Statistical Branch)

Region and States	Plants	Region and States	Plants
All regions----------	508		
Region I	55	Region VII	82
Maine	8	Wisconsin	10
New Hampshire	6	Illinois	42
Vermont	2	Indiana	30
Massachusetts	18		
Connecticut	19	Region VIII	3
Rhode Island	2	Minnesota	3
		North Dakota	none
Region II	54	South Dakota	none
New York	39	Montana	none
New Jersey	15		
		Region IX	53
Region III	40	Iowa	7
Pennsylvania	38	Missouri	29
Delaware	2	Nebraska	2
		Kansas	15
Region IV	44		
Maryland	15	Region X	18
West Virginia	3	Arkansas	1
Virginia	5	Louisiana	1
North Carolina	16	Oklahoma	7
District of Columbia	5	Texas	9
Region V	40	Region XI	33
Tennessee	8	Wyoming	none
Mississippi	2	Utah	12
Alabama	14	Colorado	21
Georgia	10	New Mexico	none
South Carolina	3		
Florida	3	Region XII	32
		California	26
Region VI	28	Nevada	none
Ohio	19	Arizona	6
Kentucky	none		
Michigan	9	Region XIII	26
		Washington	22
		Oregon	4
		Idaho	none

7/19/51
5

Number of Plants, by Industry ~~and Employment~~, Surveyed by Women's Bureau 8/40 - 5/45

Industry	States	Plants
All Industries	1/ 41	508
Aircraft		
Assembly	14	40
Engine and engine parts	12	27
Aircraft parts	12	26
Other - gliders, propellers, parachutes	5	6
Airports and modification centers	4	4
Apparel - men's shirts and uniforms	3	4
Chemicals and drugs	11	13
Depots		
Air	7	10
Ordnance	9	9
Quartermaster	6	7
Electrical		
Communication equipment	9	15
Other electrical products	4	7
Food	2	4
Instruments - surgical and scientific	6	13
Iron and steel and their products		
Foundries	4	8
Steel mills	11	31
Other	6	6
Lumber and timber	2	5
Machinery - except electrical	13	34
Machine tools (included in total machinery)	(9)	(24)
Mining	2	5
Ordnance and accessories		
Artillery ammunition	15	23
Bag and shell loading	20	29
Guns, howitzers, mortars	9	10
Sighting and fire control instruments	5	10
Small arms	6	9
Small arms ammunition	9	13
Other	4	4

Industry	States	Plants
Paper and pulp and paper products	10	34
Railroads	4	10
Rubber	6	6
Shipbuilding and repair	21	49
Sugar refining	3	5
Textile mill products		
Hosiery	1	6
Other	2	3
Miscellaneous 2/ industries	14	23

1/ The States in which these plants are located are: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, District of Columbia, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin.

2/ "Miscellaneous" includes industries in which Women's Bureau had surveyed too few plants to show separately, such as: aluminum, asbestos products, automobile - truck trailers, brass and brass products, fibre containers for shells, flour mills, leather, metal furniture, oil, packing spare parts for overseas shipment, springs and small metal parts also goggles for aviators, U. S. Signal Corps Depot, and others.

7

COMMUNITY STUDIES MADE BY WOMEN'S BUREAU STAFF DURING WORLD WAR II

States and areas covered in the studies

Subjects covered in the reports

July 13, 1951

STATES AND AREAS COVERED IN COMMUNITY STUDIES MADE BY WOMEN'S BUREAU STAFF DURING WORLD WAR II

State and Area	Date of visit
ALABAMA	
Birmingham	7/43
Childersburg, Talladega, Sylacauga area	2/42
Huntsville	3/42
Mobile	2/43
ARKANSAS	
Jacksonville	4/42
CALIFORNIA	
Mare Island	4/43
San Diego	1/42, 11/43 5/43
COLORADO	
Denver	12/41
State	5/43
CONNECTICUT	
Hartford	5/42
Waterbury	5/42
New Britain & Bristol	5/42
Bridgeport	5/42
New Haven	5/42
Meriden	5/42
FLORIDA	
Tampa	7/43
GEORGIA	
Atlanta	1/43
Brunswick	2/43
Macon area	3/42
Savannah	5/43
ILLINOIS	
Joliet, Wilmington,	2/45
Elwood area	1/42
East Alton area	1/42
Crab Orchard Lake area	1/42
Rockford	9/42
Savanna	2/42
Rock Island, Moline, Ill. & Davenport	2/42
East Alton	12/42

State and Area	Date of visit
INDIANA	
Burns City	1/42
Charleston, Jeffersonville, New Albany	12/41
Evansville	1/43 2/43
Indianapolis	2/43
Kingsbury, Walkerton, Knox area	10/42 12/41
South Bend	1/43
IOWA	
Burlington	1/44 2/42 4/42
Keokuk	9/43
Cedar Rapids	11/43
KANSAS	
Hutchinson	2/43
Wichita	12/43 12/41 2/43 7/43 4/44
Parsons	11/42
LOUISIANA	
State	7/43
Minden	3/42
New Orleans	7/43
MAINE	
Bath	4/43
Portland	4/43
MARYLAND	
Aberdeen and Edgewood	4/42 11/41
Baltimore	6/42
Elkton	11/41 2/42 6/43
MASSACHUSETTS	
Worcester	6/42

State and Area	Date of visit
MISSISSIPPI	
State	7/43
Flora	3/42
MISSOURI	
Kansas City (Includes Lake City, Mo.; Kansas City, Kansas)	12/41
St. Louis	2/42
NEBRASKA	
Sidney	6/43
NEW HAMPSHIRE	
Keen	6/42
NEW YORK	
Erie & Niagara Counties	7/43
Syracuse	12/43
NORTH CAROLINA	
Burlington	7/43
Charlotte	7/43 8/43
Durham	7/43
Elizabeth City	3/43
Wilmington	6/43
OHIO	
Akron	3/42
Cincinnati	8/42
Cleveland	3/42
Columbus	3/42
Ravenna	3/42
Sidney	8/42
OKLAHOMA	
Near Pryor	3/43
Oklahoma City	4/43
Pryor	12/41
Tulsa	12/41 4/43
SOUTH CAROLINA	
Charleston	1/43 5/43
TENNESSEE	
Memphis area (Includes Cordova, Millington	2/42
Memphis	8/43
Milan	3/42
Nashville	3/42
UTAH	
Ogden	4/43
Salt Lake City	4/43
TEXAS	
Dallas	12/41
Texarkana	4/42
Ft. Worth	12/42
VERMONT	
Springfield	7/42
VIRGINIA	
Norfolk	2/43
Radford and Dublin	11/41 3/42
WISCONSIN	
Milwaukee	3/43

July 17, 1951

SUBJECTS COVERED IN THE COMMUNITY SURVEYS

(The subjects covered vary among the areas - see chart in Statistical files for specific subjects covered in each area)

Absenteeism
Accidents and Safety Measures
Child Care
Community Facilities (medical, health, shopping, etc.)
Community Services (laundry & shopping only)
Community Attitude toward Women War Workers
Economic Character of Area
Employment of Negroes
Employment of Women
Farm Labor
Food & Food Facilities
General Working Conditions
Health & Medical Facilities
Hours
Housing
Labor Organizations
Labor Supply & Demand (Labor Mkt.)
Part-time Workers
Recreation
Registration of Women
Schools and Educational Facilities
Training
Transportation
Turnover
Type of Worker
Utilization of Women in War Industries
Wages
Miscellaneous notes

August 15, 1951

SUBJECTS IN "OLD SOURCE BOOK"

1. Hours (Optimum hours of work, shifts, rotation of shifts, lunch periods, rest periods, change in hours)
2. Absenteeism
3. Turnover
4. Labor Supply (Demand and supply, especially women workers)
5. Induction

Hiring requirements as to -

6. Age (Older women workers)
7. Marital status
8. Pregnancy
9. Handicapped workers
10. Union - Effect of union on women's employment
11. Part-time (see Miss Spring)

Community facilities -

12. Transportation
13. Child care
14. Housing
15. Community services for war workers
16. Accidents and special strains
17. Protective clothing
18. Effect of specific jobs on health of women workers and employers' efforts to improve health of workers
19. Success of women
20. Miscellaneous (Articles, newspaper clippings, items from schedules, etc. re employment of women in war industries)

NOTE: "Old Source Book" covers approximately the period 12/41 - 8/43 and contains data from firms scheduled and from other sources on the listed subjects.

11/9/51

SUBJECTS IN GENERAL SOURCE BOOK AND SPECIAL INDUSTRY SOURCE BOOKS

- Absenteeism and Turnover
- Accidents, strains and hazards; safety clothing
- Employee welfare
    - Child care
    - Housing
    - Transportation
    - Other
- Employment
- Hours
    - Shifts
    - Rotation of shifts
    - Overtime
    - Lunch periods
    - Rest periods
    - Change in hours
- Labor Supply
- Part-time work and homework
- Personnel hiring policies
    - Age
    - Handicapped workers
    - Pregnancy
    - Working mothers
- Plant facilities
    - Food
    - Medical
    - Other
- Post-war plans
- Product
- Race
- Training, induction, counselors
- Union
- Wages
    - Equal pay
    - Rates of pay
    - Wage system
- Women's jobs
    - Engineering changes
    - Job rotation
    - Suitability of jobs
    - List of jobs
- Formal recommendations

U. S. DEPARTMENT OF LABOR
Women's Bureau
Washington

LIST OF PUBLICATIONS
1918 to February 1943

Bulletins:

* 1. Proposed Employment of Women During the War in the Industries of Niagara Falls, N. Y., 1918. 16 pp. 1919.
* 2. Labor Laws for Women in Industry in Indiana. 29 pp. 1919.
* 3. Standards for the Employment of Women in Industry. 8 pp. Four editions, 1918, 1919, 1921, 1928. 5c.
* 4. Wages of Candy Makers in Philadelphia in 1919. 46 pp. 1919.
* 5. The Eight-Hour Day in Federal and State Legislation. 19 pp. 1921.
* 6. The Employment of Women in Hazardous Industries in the United States (1919). 8 pp. 1920.
* 7. Night-Work Laws in the United States (1919). 4 pp. 1920.
* 8. Women in the Government Service. 37 pp. 1920.
* 9. Home Work in Bridgeport, Conn. 35 pp. 1920.

10. Hours and Conditions of Work for Women in Industry in Virginia. 32 pp. 1920.

* 11. Women Street Car Conductors and Ticket Agents. 90 pp. 1921.
* 12. The New Position of Women in American Industry. 158 pp. 1920. 25c.
* 13. Industrial Opportunities and Training for Women and Girls. 48 pp. 1920.
* 14. A Physiological Basis for the Shorter Working Day for Women. 20 pp. 1921. 5c.
* 15. Some Effects of Legislation Limiting Hours of Work for Women. 26 pp. 1921.
* 16. State Laws Affecting Working Women. 51 pp. Charts and maps. 1921. Superseded by Bul. 40.
* 17. Women's Wages in Kansas. 104 pp. 1921 5c.
* 18. Health Problems of Women in Industry.. 11 pp. 1921 5c. (Revised to 6 pp. 5c. Again in 1935, see Bul. 136.)
* 19. Iowa Women in Industry. 73 pp. 1922. 10c.
* 20. Negro Women in Industry. 65 pp. 1922. 10c.
* 21. Women in Rhode Island Industries. 73 pp. 1922. 10c.
* 22. Women in Georgis Industries. 89 pp. 1922.
* 23. The Family Status of Breadwinning Women. 43 pp. 1922. 10c.
* 24. Women in Maryland Industries. 96 pp. 1922. 10c.
* 25. Women in the Candy Industry in Chicago and St. Louis. 72 pp. 1923. 10c.
* 26. Women in Arkansas Industries. 86 pp. 1923. 10c.
* 27. The Occupational Progress of Women. 37 pp. 1922.
* 28. Women's Contributions in the Field of Invention. 51 pp. 1923. 10c.
* 29. Women in Kentucky Industries. 114 pp. 1923. 15c.
* 30. The Share of Wage-Earning Women in Family Support. 170 pp. 1923. 20c.
* 31. What Industry Means to Women Workers. 10 pp. 1923. 5c.
* 32. Women in South Carolina Industries. 128 pp. 1923. 15c.
* 33. Proceedings of the Women's Industrial Conference. 190 pp. 1923. 20c.
* 34. Women in Alabama Industries. 86 pp. 1924. 15c.
* 35. Women in Missouri Industries. 127 pp. 1924. 15c.
* 36. Radio Talks on Women in Industry. 34 pp. 1924. 10c.
* 37. Women in New Jersey Industries. 99 pp. 1924. 15c.
* 38. Married Women in Industry. 8 pp. 1924. 5c.
* 39. Domestic Workers and Their Employment Relations. 87 pp. 1924. 15c.

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* 40. State Laws Affecting Working Women. 53 pp. and 4 pp. of maps. 1924. 15c. Superseded by Bul. 63.
* 41. Family Status of Breadwinning Women in Four Selected Cities. 145 pp. 1925. 20c.
* 42. List of Reverences on Minimum Wage for Women in the Unised States and Canada. 42 pp. 1925. 10c.
43. Standard and Scheduled Hours of Work for Women in Industry. 68 pp. 1925. 15.
* 44. Women in Ohio Industries. 137 pp. 1925. 20c.
* 45. Home Environment and Employment Opportunities of Women in Coal-Mine Workers' Families. 61 pp. 1925. 10c.
* 46. Facts About Working Women (Based on Census statistics and studies of Women's Bureau). 64 pp. 1925. 15c.
47. Women in the Fruit-Growing and Canning Industries in the State of Washington. 223 pp. 1926. 40c.
* 48. Women in Oklahoma Industries. 118 pp. 1926. 20c.
* 49. Women Workers and Family Support. 10 pp. 1925. 5c.
50. Effects of Applied Research Upon the Employment Opportunities of American Women. 54 pp. 1926. 10c.
* 51. Women in Illinois Industries. 108 pp. 1926. 15c.
52. Lost Time and Labor Turnover in Cotton Mills. 203 pp. 1926. 35c.
53. The Status of Women in the Government Service in 1925. 103 pp. 1926. 15c.
* 54. Changing Jobs. 12 pp. 1926. 5c.
* 55. Women in Mississippi Industries. 89 pp. 1926. 15c.
* 56. Women in Tennessee Industries. 120 pp. 1927. 20c.
57. Women Workers and Industrial Poisons. 5 pp. 1926. 5c.
* 58. Women in Delaware Industries. 156 pp. 1927. 25c.
* 59. Short Talks About Working Women. 24 pp. 1927. 10c.
60. Industrial Accidents to Women in New Jersey, Ohio, and Wisconsin. 316 pp. 1927. 45c.
61. The Development of Minimum-Wage Laws in the United States, 1912 to 1927 635 pp. 1928. 90c.
62. Women's Employment in Vegetable Canneries in Delaware. 47 pp. 1927. 10c.
* 63. State Laws Affecting Working Women. 51 pp. 1927. Superseded by Bul. 98.
* 64. The Employment of Women at Night. 86 pp. 1928. 15c.
* 65. The Effects of Labor Legislation on the Employment Opportunities of Women. 498 pp. 1928. 75c.
66-I. History of Labor Legislation for Women in Three States. 133 pp. 1929. 15c.
66-II. Chronological Development of Labor Legislation for Women in the United States. 151 pp. 1929. (Revised and separated from 66-I in 1932. 176 pp, 15c.
67. Women Workers in Flint, Mic. 80 pp. 1929. 15c.
68. Summary: The Effects of Labor Legislation on the Employment Opportunities of Women. (Reprint of Chapter II of Bul. 65) 22 pp. 1928. 10c.
69. Causes of Absence for Men and for Women in Four Cotton Mills. 24 pp. 1929. 5c.
70. Negro Women in Industry in 15 States. 74 pp. 1929. 15c.
* 71. Selected References on the Health of Women in Industry. 8 pp. 1929. 5c.
72. Conditions of Work in Spin Rooms. 41 pp. 1929. 10c.
73. Variations in Employment Trends of Women and Men. 143 pp. 1930. 50c.
74. The Immigrant Woman and Her Job. 179 pp. 1930. 30c.

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75. What the Wage-Earning Woman Contributes to Family Support. 21 pp. 1929. 5c.
76. Women in 5-and 10-Cent Stores and Limited-Price Chain Department Stores. 58 pp. 1930. 10c.
77. A Study of Two Groups of Denver Married Woman Applying for Jobs. 11 pp. 1929. 5c.
78. A Survey of Laundries and Their Women Workers in 23 Cities. 166 pp. 1930. 30c.
79. Industrial Home Work. 20 pp. 1930. 10c.
80. Women in Florida Industries. 115 pp. 1930. 20c.
81. Industrial Accidents to Men and Women. 48 pp. 1930. 15c.
82. The Employment of Women in the Pineapple Canneries of Hawaii. 30 pp. 1930. 15c.
83. Fluctuation of Employment in the Radio Industry. 66 pp. 1931. 15c.
* 84. Fact Finding with the Women's Bureau. 37 pp. 1931. 10c.
* 85. Wages of Women in 13 States. 213 pp. 1931. 35c.
* 86. Activities of the Women's Bureau of the United States. 15 pp. 1931. 5c.
87. Sanitary Drinking Facilities, with Special Reference to Drinking Fountains. 28 pp. 1931. 10c.
88. The Employment of Women in Slaughtering and Meat Packing. 210 pp. 1932. 40c.
89. The Industrial Experience of Women Workers at the Summer Schools, 1928 to 1930. 62 pp. 1931. 20c.
90. Oregon Legislation for Women in Industry. 40 pp. 1931. 10c.
* 91. Women in Industry: A Series of Papers to Aid Study Groups. 79 pp. 1931. 15c. (Revised in 1938; see Bul. 164.)
92. Wage-Earning Women and the Industrial Conditions of 1930. A Survey of South Bend. 84 pp. 1932. 15c.
93. Household Employment in Philadelphia. 88 pp. 1932. 10c.
* 94. State Requirements for Industrial Lighting: A Handvook for the Protection of Women Workers, Showing Lighting Standards and Practices. 65 pp. 1932. 10c.
95. Bookkeepers, Stenographers, and Office Clerks in Ohio, 1914 to 1929. 34 pp. 1932. 10c.
96. Women Office Workers in Philadelphia. 17 pp. 1932. 10c.
* 97. The Employment of Women in the Sewing Trades of Connecticut--Preliminary Report. 13 pp. 1932. 5c. (See Bul. 109.)
* 98. Labor Laws for Women in the States and Territories. 71 pp. and charts. 1932. 15c. (Revised by Supplement in 1933.) Superseded by Bul. 144.
99. The Installation and Maintenance of Toilet Facilities in Places of Employment. 89 pp. 1933. 25c.
100. The Effects on Women of Changing Conditions in the Cigar and Cigarette Industries. 187 pp. 1932. 15c.
101. The Employment of Women in Vitreous Enameling. 64 pp. 1932. 10c.
102. Industrial Injuries to Women in 1928 and 1929 Compared with injuries to Men. 36 pp. 1933. 10c.
103. Women Workers in the Third Year of the Depression--A Study of 109 Students in the Bryn Mawr Summer School. 16 pp. 1933. 5c.
104. The Occupational Progress of Women, 1910 to 1930. 90 pp. 1933. 10c.
104A. Reprint from 104 of Table Giving Basic Census Figures. 21 pp. 1940. 10c.
105. A Study of a Change from 8 to 6 Hours of Work. 14 pp. 1933. 5c.
* 106. Household Employment in Chicago. 62 pp. 1933. 10c.

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107. Technological Changes in Relation to Women's Employment. 39 pp. 1935. 10c.
108. The Effects of the Depression on Wage Earners' Families: A Second Survey of South Bend. 31 pp. 1936. 5c. (See Bul. 92.)
109. The Employment of Women in the Sewing Trades of Connecticut: Second and Final Report. 45 pp. 1935. 5c. (See Bul. 97.)
110. The Change from Manual to Dial Operation in the Telephone Industry. 15 pp. 1933. 5c.
111. Hours, Earnings, and Employment in Cotton Mills. 78 pp. 1933. 10c.
* 112. Standards of Placement Agencies for Household Employees. 68 pp. 1934. 20c.
113. Employment Fluctuations and Unemployment of Women, 1928-1931. 236 pp. 20c.
114. State Reporting of Occupational Disease, Including a Survey of Legislation Applying to Women. 99 pp. 1934. 10c.
* 115. Women at Work. 51 pp. 1933. 5c. Revised 1934 to 60 pp. 10c. Again in 1939, See Bul. 161.)
116. A Study of a Change from One Shift of 9 Hours to Two Shifts of 6 Hours Each. 14 pp. 1934. 5c.
117. The Age Factor As It Relates to Women in Business and the Professions. 66 pp. 1934. 10c.
118. The Employment of Women in Puerto Rico. 34 pp. 1934. 5c.
119. Hours and Earnings in the Leather-Glove Industry. 32 pp. 1934. 5c.
120. The Employment of Women in Offices. 126 pp. 1934. 15c.
121. A Survey of the Shoe Industry in New Hampshire. 100 pp. 1935. 10c.
122. Variations in Wage Rates Under Corresponding Conditions. 57 pp. 1935. 10c.
123. Employment in Hotels and Restaurants. 105 pp. 1936. 15c.
124. Women in Arkansas Industries. 45 pp. 1935. 5c.
125. Employment Conditions in Department Stores in 1932-33: A Study in Selected Cities of 5 States. 24 pp. 1936. 10c.
* 126. Women in Texas Industries. 81 pp. 1936. 15c.
127. Hours and Earnings in Tobacco Stemmeries. 29 pp. 1934. 5c.
128. Potential Earning Power of Southern Mountaineer Handicraft. 56 pp. 1935. 10c.
129. Industrial Injuries to Women in 1930 and 1931 Compared with Injuries to Men. 57 pp. 1935. 10c.
130. Employed Women under N. R. A. Codes. 144 pp. 1935. 20c.
131. Industrial Home Work in Rhode Island, With Special Reference to Lace Industry. 27 pp. 1935. 5c.
* 132. Women Who Work in Offices: I. Study of Employed Women. II. Study of Women Seeking Employment. 27 pp. 1935. 5c.
133. Employment Conditions in Beauty Shops. 46 pp. 1935. 10c.
134. Summaries of Studies on the Exonomic Status of Women. 20 pp. 1935. 5c.
135. The Commercialization of the Home Through Industrial Home Work. 49 pp. 1935. 5c.
* 136. The Health and Safety of Women in Industry. Revision of Bul. 18. 23 pp. 1935. 5c.
* 137. Summary of State Hour Laws for Women and Minimum-Wage Rates. 54 pp. 1936. 10c.
* 138. Reading List of References on Household Employment. 15 pp. 1936. 5c.
139. Women Enemployed Seeking Relief in 1933. 19 pp. 1936. 5c.
140. Reemployment of New England Women in Private Industry. 118 pp. 1936. 15c.
141. Piecework in the Silk Dress Industry. 68 pp. 1936. 10c.

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142. The Economic Problems of the Women of the Virgin Islands of the United States. 24 pp. 1936. 10c.
143. Factors Affecting Wages in Power Laundries. 82 pp. 1936. 10c.
* 144. State Labor Laws for Women. 93 pp. and charts. 1937. 15c. Superseded by Bul. 156.
145. Special Study of Wages Paid to Women and Minors in Ohio Industries Prior and Subsequent to the Ohio Minimum-Wage Law for Women and Minors. 83 pp. 1936. 10c.
146. A Policy Insuring Value to the Woman Buyer and a Livelihood to Apparel Makers. 22 pp. 1936. 10c.
147. Summary of State Reports of Occupational Diseases, with A Survey of Preventive Legislation, 1932 to 1934. 42 pp. 1936. 10c.
148. The Employed Woman Homemaker in the United States; Her Responsibility for Family Support. 22 pp. 1936. 10c.
149. Employment of Women in Tennessee Industries. 63 pp. 1937. 10c.
150. Women's Employment in West Virginia. 27 pp. 1937. 10c.
151. Injuries to Women in Personal-Service Occupations in Ohio. 23 pp. 1937. 10c.
152. Differences in the Earnings of Women and Men. 57 pp. 1938. 10c.
153. Women's Hours and Wages in the District of Columbia in 1937. 44 pp. 1937 10 c.
154. Reading List of References on Household Employment. 17 pp. 1938. 10c.
155. Women in the Economy of the United States of America. 137 pp. 1937. 15c.
156. State Labor Laws for Women. As of Dec. 31, 1937. 16 pp. 1938. 5c.
    Part I. Summary. As of Dec. 31, 1940. 18 pp. 1940. 5c.
    Part II. Analysis of Hours Laws for Women Workers. 45 pp. 1938. 10c.
    Also Supplement to Part II -- Summary of 1938, 1939, and 1940. 2 pp.
157. The Legal Status of Women in the United States of America. January 1, 1938: United States Summary. 89 pp. 1941. 15c. Pamphlet for each State and the District of Columbia published separately. 5c. each. Order by name.
158. Unattached Women on Relief in Chicago, 1937. 84 pp. 1938. 15c.
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163. Hours and Earnings in Certain Men's-Wear Industries:
    1. Work Clothing, Work Shirts, Dress Shirts. 27 pp. 1938. 10c.
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* Supply exhausted.

* 167. State Minimum-Wage Laws and Orders: An Analysis. 34 pp. 1939. 20 c. Also two supplements, 5c. each: 1939, 15 pp., 1940; 1940, 13 pp. 1941. Superseded by Bul. 191.

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191. State Minimum-Wage Laws and Orders. 1942: An Analysis. 52 pp. and 6 folders. 1942. 20c.
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9. Safety Caps for Women in War Factories. 4 pp. 1942. 5c.
10. Women's Effective War Work Requires Good Posture.
11. Boarding Homes for Women War Workers. 6 pp. 1943. 5c. each, $1 per 100.

Annual Reports:

* Of Director of the Woman in Industry Service. 1919.
* Of Director of the Women's Bureau. 1920 tO 1932. (In 1933 and since, issued as supplement to Annual Report of the Secretary of Labor.)

Folders:

The High Cost of Low Wages. 8 pp. (Series of three - 1938, 1939, 1940.)
Short Hours Pay. 8 pp. 1938 and 1940.
Women's Bureau of the United States Department of Labor: What It is, What It Doe What It Publishes. (Series of 14 - Most recent published in 1941 with supplement in 1942.)
Wartime Reminders to Women Who Work: The Paying Guest - The Paid Hostess. 8 pp. 1943. 5c.

Leaflets:

Why Legislate Living Wages for Women Workers? 4 pp. 1935.
The Price of Industrial Home Work and Why It Should Be Regulated. 6 pp. 1936.
The South: Assets and Needs. 1938. 8 pp.
Women Workers in the United States. (In Spanish and Portuguese.) 1939.

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* Supply exhausted.

Pamphlets (not numbered);

Women's Place in Industry in 10 Southern States. 14 pp. 1931 5¢.
On the Home Front with Minimum Wage.
Labor Laws for Women Advocated by Women's Bureau, U. S. Department of Labor. 8 pp.

Miscellaneous:

Earnings and Standard of Living of 1,000 Railway Employees Furing the Depression.
Memorandum on the Practicability of Setting Maximum Standards of Work in Cotton Mills Operating Under the Stretch-Out System. 4 pp. 1933.
The Woman Worker:
Formerly (January 1938 to May 1942) published every 2 months. 16 pp. In 1942 and since, combined with other Department of Labor publications as Labor Information Bulletin, issued monthly.

7/19/51
5

Number of Plants, by Industry ~~and Employment~~, Surveyed by Women's Bureau 8/40 - 5/45

Industry	States	Plants
All Industries	1/ 41	508
Aircraft		
Assembly	14	40
Engine and engine parts	12	27
Aircraft parts	12	26
Other - gliders, propellers, parachutes	5	6
Airports and modification centers	4	4
Apparel - men's shirts and uniforms	3	4
Chemicals and drugs	11	13
Depots		
Air	7	10
Ordnance	9	9
Quartermaster	6	7
Electrical		
Communication equipment	9	15
Other electrical products	4	7
Food	2	4
Instruments - surgical and scientific	6	13
Iron and steel and their products		
Foundries	4	8
Steel mills	11	31
Other	6	6
Lumber and timber	2	5
Machinery - except electrical	13	34
Machine tools (included in total machinery)	(9)	(24)
Mining	2	5
Ordnance and accessories		
Artillery ammunition	15	23
Bag and shell loading	20	29
Guns, howitzers, mortars	9	10
Sighting and fire control instruments	5	10
Small arms	6	9
Small arms ammunition	9	13
Other	4	4

Industry	States	Plants
Paper and pulp and paper products	10	34
Railroads	4	10
Rubber	6	6
Shipbuilding and repair	21	49
Sugar refining	3	5
Textile mill products		
Hosiery	1	6
Other	2	3
Miscellaneous 2/ industries	14	23

1/ The States in which these plants are located are: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, District of Columbia, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin.

2/ "Miscellaneous" includes industries in which Women's Bureau had surveyed too few plants to show separately, such as: aluminum, asbestos products, automobile - truck trailers, brass and brass products, fibre containers for shells, flour mills, leather, metal furniture, oil, packing spare parts for overseas shipment, springs and small metal parts also goggles for aviators, U. S. Signal Corps Depot, and others.

July 13, 1951

STATES AND AREAS COVERED IN COMMUNITY STUDIES MADE BY WOMEN'S BUREAU STAFF DURING WORLD WAR II

State and Area	Date of visit
ALABAMA	
Birmingham	7/43
Childersburg, Talladega, Sylacauga area	2/42
Huntsville	3/42
Mobile	2/43
ARKANSAS	
Jacksonville	4/42
CALIFORNIA	
Mare Island	4/43
San Diego	1/42, 11/43 5/43
COLORADO	
Denver	12/41
State	5/43
CONNECTICUT	
Hartford	5/42
Waterbury	5/42
New Britain & Bristol	5/42
Bridgeport	5/42
New Haven	5/42
Meriden	5/42
FLORIDA	
Tampa	7/43
GEORGIA	
Atlanta	1/43
Brunswick	2/43
Macon area	3/42
Savannah	5/43
ILLINOIS	
Joliet, Wilmington,	2/45
Elwood area	1/42
East Alton area	1/42
Crab Orchard Lake area	1/42
Rockford	9/42
Savanna	2/42
Rock Island, Moline, Ill. & Davenport	2/42
East Alton	12/42
INDIANA	
Burns City	1/42
Charleston, Jeffersonville, New Albany	12/41
Evansville	1/43 2/43
Indianapolis	2/43
Kingsbury, Walkerton, Knox area	10/42 12/41
South Bend	1/43
IOWA	
Burlington	1/44 2/42 4/42
Keokuk	9/43
Cedar Rapids	11/43
KANSAS	
Hutchinson	2/43
Wichita	12/43 12/41 2/43 7/43 4/44
Parsons	11/42
LOUISIANA	
State	7/43
Minden	3/42
New Orleans	7/43
MAINE	
Bath	4/43
Portland	4/43
MARYLAND	
Aberdeen and Edgewood	4/42 11/41
Baltimore	6/42
Elkton	11/41 2/42 6/43
MASSACHUSETTS	
Worcester	6/42

State and Area	Date of visit
MISSISSIPPI	
State	7/43
Flora	3/42
MISSOURI	
Kansas City (Includes Lake City, Mo.; Kansas City, Kansas)	12/41
St. Louis	2/42
NEBRASKA	
Sidney	6/43
NEW HAMPSHIRE	
Keen	6/42
NEW YORK	
Erie & Niagara Counties	7/43
Syracuse	12/43
NORTH CAROLINA	
Burlington	7/43
Charlotte	7/43 8/43
Durham	7/43
Elizabeth City	3/43
Wilmington	6/43
OHIO	
Akron	3/42
Cincinnati	8/42
Cleveland	3/42
Columbus	3/42
Ravenna	3/42
Sidney	8/42
OKLAHOMA	
Near Pryor	3/43
Oklahoma City	4/43
Pryor	12/41
Tulsa	12/41 4/43
SOUTH CAROLINA	
Charleston	1/43 5/43

State and Area	Date of visit
TENNESSEE	
Memphis area (Includes Cordova, Millington	2/42
Memphis	8/43
Milan	3/42
Nashville	3/42
UTAH	
Ogden	4/43
Salt Lake City	4/43
TEXAS	
Dallas	12/41
Texarkana	4/42
Ft. Worth	12/42
VERMONT	
Springfield	7/42
VIRGINIA	
Norfolk	2/43
Radford and Dublin	11/41 3/42
WISCONSIN	
Milwaukee	3/43

July 17, 1951

SUBJECTS COVERED IN THE COMMUNITY SURVEYS

(The subjects covered vary among the areas - see chart in Statistical files for specific subjects covered in each area)

Absenteeism
Accidents and Safety Measures
Child Care
Community Facilities (medical, health, shopping, etc.)
Community Services (laundry & shopping only)
Community Attitude toward Women War Workers
Economic Character of Area
Employment of Negroes
Employment of Women
Farm Labor
Food & Food Facilities
General Working Conditions
Health & Medical Facilities
Hours
Housing
Labor Organizations
Labor Supply & Demand (Labor Mkt.)
Part-time Workers
Recreation
Registration of Women
Schools and Educational Facilities
Training
Transportation
Turnover
Type of Worker
Utilization of Women in War Industries
Wages
Miscellaneous notes

IMPACT OF THE WAR ON EMPLOYMENT IN 72 CENTERS OF WAR ACTIVITY

U. S. DEPARTMENT OF LABOR

BUREAU OF LABOR STATISTICS
Employment and Occupational Outlook Branch

February 1945

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FOREWORD

In the pages to follow are estimates of wartime changes in employment in seventy-two areas. Similar data for other areas will appear later.

The periods chosen for employment comparisons are April 1940 (for which data are available from the United States Census of population); November 1943 (a month near the peak of war production); May 1944, and September 1944. Estimates of civilian employment in manufacturing establishments and in other nonagricultural establishments are presented for these dates for each area. Estimates of employment in several of the more important industries in each area are presented separately, wherever this can be done without disclosing data from individual firms. Employment in military and naval establishments is also shown separately in areas where such employment is relatively large. United States Census estimates of population for November 1943 are given for comparison with April 1940 population in each area.

In compiling the estimates of area employment presented herewith, the Bureau has supplemented its manufacturing employment statistics for metropolitan districts with other employment statistics that it collects currently and with data from the War Manpower Commission, State unemployment compensation commissions, State departments of labor, and other sources. These estimates, presented in absolute numbers, will be more useful measures of wartime dislocations than the indexes heretofore published by the Bureau. More particularly the data hitherto available covered only manufacturing employment and no breakdown of these figures was available for the leading industries within the community.

The data presented in these tables are sufficiently reliable to serve as useful background against which to judge changes required to reconvert from war to peacetime production. They are, however, preliminary figures. There are no data at this time sufficiently complete and comparable to permit refined comparisons between cities. The Bureau is now engaged in the preparation of more accurate estimates of employment by states and as a by-product of such studies will be able to revise the estimates for many areas. In the meantime, the figures here presented show the general magnitude of the changes that the war has brought to individual communities.

The estimates of employment in the 72 areas in this report were prepared in the Employment Statistics Division by the staff of the Area Studies Section, under the supervision of Marion Hayes.

Employment: AKRON AREA

Counties included: Summit, O.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	95,500	173,500	160,000	157,500
Manufacturing..................	55,000	129,000	117,000	115,000
Other nonagric. estab..........	40,500	44,500	43,000	42,500
Selected industries				
Rubber products................	a/36,000	74,000	72,000	72,000
Transp. equip. incl. autos.....	500	30,500	25,500	24,300
Civilian population.............	339,405	363,652		

a/ Estimated.

Employment: ALBANY-SCHENECTADY-TROY

Counties included: Albany, Rensselaer, Schenectady, N. Y.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	143,000	200,000	192,000	189,000
Manufacturing..................	56,000	105,000	98,000	96,000
Other nonagric. estab..........	87,000	95,000	94,000	93,000
Selected industries				
Electrical machinery...........	b/18,000	45,000	40,000	37,500
Ordnance and accessories.......	b/1,500	7,700	8,300	8,400
Apparel, other fabr. text......	7,500	6,700	6,400	6,200
Nonmfg. milit., naval (civilian).	300	7,300	7,200	7,700
Civilian population.............	465,500	446,558		

a/ Adjusted to include workers commuting from other areas.
b/ Estimated.

Employment: ATLANTA AREA

Counties included: Cobb, DeKalb, Fulton, Ga.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	144,500	186,000	191,000	193,000
Manufacturing..................	39,500	62,000	69,000	71,000
Other nonagric. estab..........	105,000	124,000	122,000	122,000
Selected industries				
Transp. equip. except auto.....	200	13,400	23,300	25,500
Textile-mill products..........	7,800	10,700	9,900	9,300
Nonmfg. milit., naval (civilian).	900	16,400	16,600	16,900
Civilian population.............	515,533	529,277		

Employment: BALTIMORE AREA

Counties included: Baltimore City, Baltimore County, Md.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	332,000	502,000	477,000	458,000
Manufacturing..................	132,000	280,000	260,000	242,000
Other nonagric. estab..........	200,000	222,000	217,000	216,000
Selected industries				
Transp. equip. incl. autos.....	18,300	128,000	116,000	100,000
Iron, steel and products	32,000	32,000	32,000	33,000
Electrical machinery...........	b/ 2,600	24,900	20,600	18,900
Nonmfg. milit., naval (civilian).	600	7,200	8,300	8,500
Civilian population.............	1,011,793	1,130,366		

a/ Adjusted to include workers commuting from other areas
b/ Estimated.

Employment: BIRMINGHAM AREA

Counties included: Jefferson, Ala.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	119,000	140,000	139,000	137,000
Manufacturing..................	40,000	58,000	61,000	60,000
Other nonagric. estab..........	79,000	82,000	78,000	77,000
Selected industries				
Iron, steel and products.......	23,900	29,500	28,500	28,000
Transp. equip. incl. autos.....	700	6,500	10,200	8,800
Ordnance and accessories.......	---	1,700	3,100	3,700
Civilian population.............	459,930	470,383		

Employment: BOSTON AREA

Counties included: Essex, Middlesex, Norfolk, Suffolk, Mass.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	775,000	915,000	885,000	860,000
Manufacturing..................	295,000	485,000	465,000	445,000
Other nonagric. estab..........	480,000	430,000	420,000	415,000
Selected industries				
Transp. equip. incl. autos.....	20,500	100,000	91,000	81,000
Electrical machinery...........	a/18,000	70,000	75,000	76,000
Textile-mill products..........	54,000	67,000	63,000	59,000
Nonmfg. milit., naval (civilian).	1,000	18,400	19,600	19,800
Civilian population..............	2,652,909	2,514,203		

a/ Estimated

Employment: BRIDGEPORT-NEW-HAVEN-WATERBURY AREA

Counties included: Fairfield, New Haven, Conn.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	297,000	412,000	383,000	376,000
Manufacturing	162,000	285,000	260,000	255,000
Other nonagric. estab	135,000	127,000	123,000	121,000
Selected industries				
Ordnance and accessories	a/9,000	85,000	70,000	68,000
Machinery	b/25,000	46,500	43,000	41,500
Nonferrous metals and prod	33,000	36,500	32,000	30,500
Transp. equip. except autos	2,600	24,700	24,500	22,900
Civilian population	902,700	912,028		

a/ Estimated.
b/ Adjusted to allow for under-reporting.

Employment: BUFFALO AREA

Counties included: Erie, Niagara, N.Y.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	269,000	416,000	401,000	389,000
Manufacturing	124,000	260,000	248,000	238,000
Other nonagric. estab	145,000	156,000	153,000	151,000
Selected industries				
Transp. equip. except autos	7,600	99,000	94,000	86,000
Iron, steel and products	28,000	37,000	37,000	38,000
Machinery	12,200	24,100	23,100	23,100
Chemicals and allied prod	12,600	18,600	18,200	18,300
Ordnance and accessories	----	9,100	7,700	8,000
Nonmfg. milit., naval (civilian)	100	3,300	3,700	3,800
Civilian population	957,677	961,345		

Employment: CANTON AREA

Counties included: Stark, Tuscarawas, O.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	80,000	115,000	112,000	110,500
Manufacturing..................	42,500	79,000	77,000	76,000
Other nonagric. estab..........	37,500	36,000	35,000	34,500
Selected industries				
Iron, steel and products.......	24,100	33,000	30,500	30,000
Machinery......................	5,000	22,300	22,000	22,100
Ordnance and accessories.......	---	7,000	8,200	7,300
Civilian population.............	303,703	310,617		

Employment: CHATTANOOGA AREA

Counties included: Hamilton, Tenn.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	50,500	60,000	57,000	56,000
Manufacturing..................	23,000	32,500	30,500	30,000
Other nonagric. estab..........	27,500	27,500	26,500	26,000
Selected industries				
Iron, steel and products.......	5,600	7,700	6,900	6,400
Textile-mill products..........	8,200	7,700	7,300	7,100
Chemicals and allied products..	700	3,700	2,800	3,100
Machinery......................	800	2,300	2,800	2,500
Civilian population.............	180,478	179,269		

a/ Adjusted to include workers commuting from other areas.

Employment: CHICAGO AREA

Counties included: Cook, Du Page, Kane, Lake, Will, Ill; Lake, Ind.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	1,590,000	1,950,000	1,920,000	1,900,000
Manufacturing..................	660,000	1,010,000	1,000,000	990,000
Other nonagric. estab..........	930,000	940,000	920,000	910,000
Selected industries				
Iron, steel and products.......	144,000	190,000	184,000	180,000
Machinery......................	113,000	181,000	196,000	184,000
Food and kindred products......	85,000	98,000	96,000	97,000
Transp. equip. except autos....	10,600	92,000	98,000	111,000
Nonmfg. milit., naval (civilian).	1,700	34,000	34,000	34,500
Civilian population.............	4,819,108	4,754,463		

a/ Adjusted to include workers commuting from other areas.

Employment: CINCINNATI AREA

Counties included: Butler, Hamilton, O; Campbell, Kenton, Ky.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	271,000	373,000	360,000	358,000
Manufacturing..................	116,000	209,000	200,000	199,000
Other nonagric. estab..........	155,000	164,000	160,000	159,000
Selected industries				
Transp. equip. except autos....	300	48,500	45,000	44,000
Machinery......................	20,500	45,000	44,500	44,000
Nonmfg. milit., naval (civilian).	500	7,300	7,500	7,600
Civilian population.............	905,352	936,501		

a/ Adjusted to include workers commuting from other areas.

Employment: CLEVELAND AREA

Counties included: Cuyahoga, Lorain, O.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	415,000	587,000	565,000	558,000
Manufacturing..................	191,000	360,000	345,000	340,000
Other nonagric. estab..........	224,000	227,000	220,000	218,000
Selected industries				
Iron, steel and products.......	62,000	78,000	74,000	73,000
Machinery, except electrical... a/	26,000	76,000	73,000	72,000
Transp. equip. except autos....	4,700	59,000	49,000	50,000
Electrical machinery........... a/	11,900	30,500	28,000	29,000
Nonferrous metals and prod.....	8,500	17,900	24,900	23,100
Nonmfg. milit., naval (civilian)	200	5,700	6,000	6,000
Civilian population..............	1,329,228	1,342,285		

a/ Estimated.

Employment: COLUMBUS AREA

Counties included: Franklin, O.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	113,000	167,000	162,000	160,000
Manufacturing..................	33,000	71,000	68,000	67,000
Other nonagric. estab..........	80,000	96,000	94,000	93,000
Selected industries				
Transp. equip. except autos....	400	25,500	25,500	24,700
Nonmfg. milit.,naval(civilian).	400	13,500	12,900	13,200
Civilian population..............	387,644	415,930		

Employment: DALLAS AREA

Counties included: Dallas, Tex.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments..........	116,500	179,000	178,000	162,000
Manufacturing....................	26,500	79,000	82,000	66,000
Other nonagric. estab...........	90,000	100,000	96,000	96,000
Selected industries				
Aircraft, autos and parts........	1,600	45,500	49,000	36,500
Nonmfg. milit., naval (civilian)..	---	5,200	5,700	5,800
Civilian population...............	398,471	442,967		

Employment: DAYTON-SPRINGFIELD AREA

Counties included: Clark, Greene, Montgomery, O.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments..........	123,000	208,000	197,000	195,000
Manufacturing....................	64,000	111,000	105,000	104,000
Other nonagric. estab...........	59,000	97,000	92,000	91,000
Selected industries				
Ordnance and accessories.........	---	42,000	39,000	39,000
Transp. equip. except autos......	900	18,000	16,300	16,200
Machinery........................	27,000	16,100	15,800	15,400
Nonmfg. milit., naval (civilian)..	2,600	38,500	36,000	36,000
Civilian population...............	425,491	482,142		

Employment: DENVER AREA

Counties included: Adams, Arapahoe, Denver, Jefferson, Colo.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	108,900	152,000	134,500	135,500
Manufacturing..................	20,900	50,000	37,500	36,500
Other nonagric. estab..........	88,000	102,000	97,000	99,000
Selected industries				
Ordnance and accessories.......	----	18,700	5,800	4,600
Transp. equip. incl. autos.....	500	4,500	5,200	5,700
Machinery......................	1,700	2,700	2,700	2,700
Nonmfg. milit., naval (civilian).	300	8,500	7,100	7,100
Civilian population..............	403,748	426,663		

Employment: DES MOINES AREA

Counties included: Polk, Ia.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	54,600	76,500	68,500	65,300
Manufacturing..................	11,600	34,500	27,500	24,300
Other nonagric. estab..........	43,000	42,000	41,000	41,000
Selected industries				
Ordnance and aircraft..........	----	19,400	12,700	9,700
Nonmfg. milit., naval (civilian).	----	1,700	1,800	1,900
Civilian population	194,575	188,572		

Employment: DETROIT AREA

Counties included: Macomb, Oakland, Washtenaw, Wayne, Mich.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	780,000	1,185,000	1,130,000	1,115,000
Manufacturing..................	430,000	790,000	750,000	740,000
Other nonagric. estab..........	350,000	395,000	380,000	375,000
Selected industries				
Transp. equip. incl. autos.....	280,000	430,000	410,000	400,000
Nonmfg. milit., naval (civilian).	900	23,600	23,400	23,400
Civilian population..............	2,454,633	2,709,944	2,658,700[a]	

[a] Resident population of the area in June, 1944, according to a special census. Includes members of the armed forces living off post. Includes 254,485 persons who migrated into the area after 1940.

Employment: DULUTH-SUPERIOR

Counties included: St. Louis, Minn., Douglas, Wis.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	55,600	76,300	73,800	73,700
Manufacturing..................	8,100	24,300	23,800	23,700
Other nonagric. estab..........	47,500	52,000	50,000	50,000
Selected industries				
Shipbuilding and ordnance......	[a]100	12,000	13,100	13,300
Iron, steel and products.......	2,200	5,100	4,700	4,700
Civilian population..............	253,986	228,716		

[a] Estimated.

Employment: ERIE AREA

Counties included: Erie, Pa.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civiliam employment in nonagric. establishments........	48,200	68,100	65,800	64,100
Manufacturing..................	26,000	48,000	46,000	44,500
Other nonagric. estab..........	22,200	20,100	19,800	19,600
Selected industries				
Machinery......................	8,400	18,400	16,500	15,800
Iron, steel and products........	6,700	8,800	8,200	8,000
Aircraft, parts and rubber.....	a/700	8,300	8,000	7,200
Civilian population..............	180,813	185,179		

a/ Estimated.

Employment: EVANSVILLE AREA

Counties included: Vanderburgh, Ind.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	37,800	84,100	75,400	75,100
Manufacturing..................	18,500	63,000	55,000	55,000
Other nonagric. estab..........	19,300	21,100	20,400	20,100
Selected industries				
Transp. equip. incl. autos.....	2,300	36,000	39,500	39,500
Machinery and ordnance.........	7,100	16,300	4,900	6,900
Civilian population..............	130,746	151,245		

a/ Adjusted to include workers commuting from other areas.

Employment: FALL RIVER-NEW BEDFORD AREA

Counties included: Bristol, Mass.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	113,000	125,000	120,000	117,000
Manufacturing..................	71,000	87,000	83,000	80,000
Other nonagric. estab..........	42,000	38,000	37,000	37,000
Selected industries				
Textile-mill products..........	35,000	34,000	32,500	31,500
Machinery......................	3,300	13,100	12,700	11,400
Civilian population..............	364,604	342,529		

a/ Adjusted to exclude several hundred residents of the area who commuted to the Naval Torpedo Station at Newport, R.I.

Employment: FLINT AREA

Counties included: Genesee, Mich.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	64,700	94,400	83,100	82,800
Manufacturing..................	41,500	72,000	62,000	62,000
Other nonagric. estab..........	23,200	22,400	21,100	20,800
Selected industries				
Aircraft, autos and parts......	36,500	43,500	33,500	33,500
Ordnance and accessories.......	---	23,800	23,800	23,600
Civilian population..............	227,944	228,183		

Employment: FORT WAYNE AREA

Counties included: Allen, Ind.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	44,300	69,500	68,400	68,300
Manufacturing	19,300	44,000	43,500	43,500
Other nonagric. estab.	25,000	25,500	24,900	24,800
Selected industries				
Electrical machinery	a/7,100	22,700	23,300	23,000
Transp. equip. incl. autos	2,200	10,100	10,300	8,600
Other machinery and ordnance	a/2,000	4,600	3,600	5,700
Civilian population	155,084	152,686		

a/ Estimated.

Employment: FORT WORTH AREA

Counties included: Tarrant, Tex.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	58,500	105,000	95,000	93,500
Manufacturing	14,000	53,000	45,000	43,500
Other nonagric. estab.	44,500	52,000	50,000	50,000
Selected industries				
Nonmfg. milit., naval (civilian)	---	3,600	3,500	3,600
Civilian population	225,521	267,856		

Employment: GRAND RAPIDS AREA

Counties included: Kent, Mich.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	67,000	75,500	73,500	73,500
Manufacturing..................	30,500	42,500	41,500	42,000
Other nonagric. estab..........	36,500	33,000	32,000	31,500
Selected industries				
Aircraft, parts and ordnance...	a/100	23,500	21,000	20,800
Machinery......................	4,400	2,800	5,900	5,600
Civilian population..............	246,338	231,381		

a/ Estimated.

Employment: HAMPTON ROADS AREA

Includes: Elizabeth City, Norfolk, Warwick and York Counties; Hampton, Norfolk, Portsmouth, South Norfolk, Newport News Cities

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	91,500	195,000	190,000	182,000
Manufacturing..................	31,500	85,000	77,000	72,000
Other nonagric. estab..........	60,000	110,000	113,000	110,000
Selected industries				
Shipbuilding and repair........	a/20,100	72,000	65,000	60,000
Nonmfg. milit., naval (civilian).	3,400	31,000	37,000	36,000
Civilian population..............	310,324	489,795	b/ 470,526	

a/ Estimated.

b/ Resident population of the area exclusive of York County in May 1944 according to a special census. Includes members of the armed forces living off post. Includes 158,984 persons who migrated into the area after April 1940.

Employment: INDIANAPOLIS AREA

Counties included: Marion, Ind.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	143,000	222,000	212,000	206,000
Manufacturing.................	51,000	118,000	111,000	106,000
Other nonagric. estab..........	92,000	104,000	101,000	100,000
Selected industries				
Aircraft, autos and parts......	b/5,500	36,000	37,500	35,500
Machinery.....................	8,700	22,200	22,000	20,700
Ordnance and accessories.......	---	18,900	11,700	10,600
Nonmfg. milit., naval (civilian).	200	3,500	3,500	3,500
Civilian population.............	457,591	491,053		

a/ Adjusted to include workers commuting from other areas.
b/ Estimated.

Employment: JACKSONVILLE AREA

Counties included: Duval, Fla.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	57,500	94,500	88,000	85,000
Manufacturing.................	11,000	31,500	28,000	28,000
Other nonagric. estab..........	46,500	63,000	60,000	57,000
Selected industries				
Shipbuilding and repair........	a/200	19,900	17,400	17,300
Nonmfg. milit., naval (civilian).	200	8,400	8,100	8,700
Civilian population.............	210,143	245,123		

a/ Estimated.

Employment: HARTFORD AREA

Counties include: Hartford, Conn.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	155,000	221,000	210,000	197,000
Manufacturing..................	77,000	145,000	136,000	125,000
Other nonagric. estab..........	78,000	76,000	74,000	72,000
Selected industries				
Transp. equip. incl. autos.....	8,000	47,000	45,000	42,000
Machinery......................	a/27,000	37,500	36,000	34,500
Iron, steel and ordnance.......	21,000	20,200	18,600	16,600
Civilian population..............	450,189	474,286		

a/ Adjusted to allow for under-reporting.

Employment: HOUSTON AREA

Counties included: Harris, Tex.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	156,000	236,000	224,000	215,000
Manufacturing..................	43,000	102,000	98,000	93,000
Other nonagric. estab..........	113,000	134,000	126,000	122,000
Selected industries				
Shipbuilding and repair a/.....	b/100	42,500	38,500	32,500
Nonmfg. milit., naval (civilian).	100	2,400	2,300	2,300
Civilian population..............	528,961	601,249		

a/ Excludes manufacturers of components.
b/ Estimated.

Employment: KANSAS CITY AREA

Counties included: Clay, Jackson, Mo; Wyandotte, Kans.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in				
nonagric. establishments........	197,000	284,000	275,000	274,000
Manufacturing.................	55,000	126,000	122,000	124,000
Other nonagric. estab..........	142,000	158,000	153,000	150,000
Selected industries				
Aircraft parts and shipbuilding..	400	42,000	47,000	45,500
Food and kindred products......	14,500	20,400	19,800	20,600
Ordnance, autos and auto equip.	4,700	19,200	10,800	11,200
Iron, steel and products.......	5,900	7,400	6,800	7,000
Machinery......................	2,800	7,000	6,800	7,800
Apparel, other fabr. text......	6,000	6,600	6,500	6,500
Nonmfg. milit., naval (civilian).	400	5,900	6,200	6,800
Civilian population.............	658,315	665,755		

a/ Adjusted to include workers commuting from other areas.

Employment: KNOXVILLE-ALCOA AREA

Counties included: Knox, Blount, Tenn.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in				
nonagric. establishments........	55,700	73,000	70,000	68,000
Manufacturing.................	22,700	35,000	33,000	31,000
Other nonagric. estab..........	33,000	38,000	37,000	37,000
Selected industries				
Iron, steel and products.......	6,200	15,500	15,000	13,900
Textile-mill products..........	7,100	7,800	6,900	6,800
Civilian population.............	219,584	239,923		

a/ Adjusted to include workers commuting from other areas.

Employment: LOS ANGELES AREA

Counties included: Los Angeles, Calif.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	775,000	1,270,000	1,260,000	1,220,000
Manufacturing.................	205,000	630,000	610,000	560,000
Other nonagric. estab.........	570,000	640,000	650,000	660,000
Selected industries				
Transp. equip. except autos....	32,500	380,000	350,000	310,000
Nonmfg.milit.,naval (civilian)...	700	25,500	24,200	26,500
Civilian population..............	2,782,998	3,138,797	3,195,132 a/	

a/ Resident population in April, 1944, according to a special census. Includes members of the armed forces living off post.

Note on classification: Employment at Roosevelt Base Navy Drydocks is included in manufacturing. Other War and Navy Department employment is included in "Nonmanufacturing Military, Naval."

Employment: LOUISVILLE AREA

Counties included: Jefferson, Ky; Clark, Floyd, Ind.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	129,000	198,000	196,000	199,000
Manufacturing.................	46,000	100,000	103,000	106,000
Other nonagric. estab.........	83,000	98,000	93,000	93,000
Selected industries				
Transp. equip. incl. autos.....	1,800	17,200	19,100	20,200
Chemicals and allied prod......	2,200	15,800	14,400	15,000
Nonferrous metals and prod.....	1,000	10,700	11,000	10,800
Ordnance and accessories.......	---	8,500	12,100	12,700
Nonmfg.milit., naval (civilian)..	1,100	7,900	7,300	7,400
Civilian population..............	451,350	508,719		

Employment: MEMPHIS AREA

Counties included: Shelby, Tenn.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments..........	97,000	133,000	132,000	132,000
Manufacturing....................	25,000	51,000	52,000	51,000
Other nonagric. estab............	72,000	82,000	80,000	81,000
Selected industries				
Chemicals and ordnance...........	2,900	10,400	9,700	9,600
Transp. equip. incl. autos.......	2,200	9,900	11,800	11,000
Nonmfg. milit.,naval (civilian)..	300	9,000	8,600	8,000
Civilian population................	358,151	378,108		

Employment: MIAMI AREA

Counties included: Dade, Fla.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments...........	75,900	107,400	101,500	95,000
Manufacturing.....................	7,900	14,400	13,500	13,000
Other nonagric. estab.............	68,000	93,000	88,000	82,000
Selected industries				
Transp. equip. incl. autos........	500	6,000	5,200	4,900
Nonmfg. milit.,naval (civilian)...	---	11,100	11,800	12,800
Civilian population................	267,739	294,445		

Employment: MILWAUKEE AREA

Counties included: Milwaukee, Wisc.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	233,000	331,000	321,000	320,000
Manufacturing	107,000	203,000	195,000	195,000
Other nonagric. estab.	126,000	128,000	126,000	125,000
Selected industries				
Machinery	29,500	79,000	80,000	86,000
Transp. equip. except autos	1,200	26,500	25,500	26,000
Iron, steel and products	17,400	19,600	19,200	16,900
Civilian population	766,769	762,105		

Employment: MINNEAPOLIS-ST. PAUL AREA

Counties included: Dakota, Hennepin, Ramsey, Minn.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	270,000	347,000	331,000	328,000
Manufacturing	72,000	151,000	140,000	136,000
Other nonagric. estab.	198,000	196,000	191,000	192,000
Selected industries				
Ordnance and accessories	---	43,000	33,500	31,000
Machinery	10,200	18,000	17,200	16,300
Aircraft, autos and parts	2,300	13,700	13,300	12,700
Civilian population	915,220	892,805		

Employment: NASHVILLE AREA

Counties included: Davidson, Tenn.

Type of Employment	April 1940 a/	Nov. 1944	May 1944	Sept. 1944
Civilian employment in				
nonagric. establishments............	70,200	81,000	76,000	76,000
Manufacturing......................	22,200	34,000	30,500	31,000
Other nonagric. estab.............	48,000	47,000	45,500	45,000
Selected industries				
Trans. equip. incl. autos..........	200	8,000	5,900	6,300
Chemicals and allied products......	4,600	4,900	5,000	4,800
Textile-mill products..............	2,100	3,300	3,200	2,800
Apparel, other fabr. text..........	1,800	2,700	2,700	2,700
Nonmfg. milit.,naval (civilian)....	200	2,500	2,400	2,400
Civilian population..................	257,267	261,258		

a/ Adjusted to include workers commuting from other areas.

Employment: NEW ORLEANS AREA

Parishes included: Jefferson, Orleans, St. Bernard, La.

Type of Employment	April 1940	Nov. 1944	May 1944	Sept. 1944
Civilian employment in				
nonagric. establishments...........	148,000	223,000	219,000	217,000
Manufacturing.....................	35,000	88,000	87,000	81,000
Other nonmfg. estab...............	113,000	135,000	132,000	136,000
Selected industries				
Trans. equip. incl. autos.........	1,700	48,000	50,000	47,000
Nonmfg. milit.,naval (civilian)...	900	11,300	13,100	13,500
Civilian population.................	551,790	591,565		

Employment: NEW YORK-NEWARK-JERSEY CITY AREA

Counties included: Bronx, Kings, Nassau, New York, Queens, Richmond, Westchester, Suffolk, N. Y; Bergen, Essex, Hudson, Middlesex, Passaic, Union, N. J.

Type of Employment	April 1940	Nov. 1944	May 1944	Sept. 1944
Civilian employment in nonagric. establishments.......	3,520,000	4,300,000	4,100,000	4,025,000
Manufacturing.................	1,220,000	1,950,000	1,900,000	1,850,000
Other nonagric. estab.........	2,300,000	2,350,000	2,200,000	2,175,000
Selected industries				
Shipbuilding and repair.......	a/30,000	212,000	206,000	192,000
Other trans. equip. incl. autos.........................	a/34,000	198,000	183,000	166,000
Electrical machinery..........	a/57,000	172,000	175,000	171,000
Nonmfg. milit.,naval (civilian)..	4,500	96,000	106,000	107,000
Civilian population............	11,362,914	10,539,976		

a/ Estimated.

Employment: OKLAHOMA CITY AREA

Counties included: Oklahoma, Okla.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments.........	63,400	105,500	102,500	103,000
Manufacturing..................	10,400	36,500	35,500	36,000
Other nonagric. estab..........	53,000	69,000	67,000	67,000
Selected industries				
Transp. equip. incl. autos......	200	23,100	22,600	22,200
Nonmfg. milit.,naval (civilian).	---	15,100	14,500	14,700
Civilian population..............	224,159	256,559		

Employment: OMAHA AREA

Counties included: Douglas, Sarpy, Saunders, Neb; Pottawattamie, Ia.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	86,800	120,000	116,000	115,500
Manufacturing	17,800	46,000	44,000	43,500
Other nonagric. estab.	69,000	74,000	72,000	72,000
Selected industries				
Food and kindred products	9,700	17,700	17,700	16,900
Transp. equip. incl. autos	300	14,600	13,400	12,700
Ordnance and accessories	---	3,500	3,100	3,400
Nonmfg. milit.,naval (civilian).	400	4,900	4,900	5,000
Civilian population	340,995	330,758		

Employment: PEORIA AREA

Counties included: Peoria, Tazewell, Ill.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	67,500	81,500	82,500	84,000
Manufacturing	26,500	40,500	42,500	44,000
Other nonagric. estab.	41,000	40,500	40,000	40,000
Selected industries				
Machinery	12,000	23,200	25,000	25,500
Iron, steel and ordnance	2,700	3,900	3,900	3,800
Chemicals and allied products	700	b/3,000	b/3,500	b/4,400
Civilian population	211,736	199,525		

a/ Adjusted to include workers commuting from other areas.

b/ Includes two distilling companies, former producers of whiskey, which are now making industrial alcohol.

Employment: PHILADELPHIA-CAMDEN AREA

Counties included: Bucks, Chester, Delaware, Montgomery, Philadelphia, Pa; Burlington, Camden, Gloucester, N. J.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	935,000	1,215,000	1,175,000	1,145,000
Manufacturing..................	425,000	720,000	690,000	670,000
Other nonagric. estab..........	510,000	495,000	485,000	475,000
Selected industries				
Shipbuilding and repairs.......	27,500	127,000	118,000	111,000
Machinery......................	44,500	102,000	107,000	105,000
Other transp. except autos.....	4,300	84,000	77,000	64,000
Iron, steel and products.......	46,500	48,000	48,000	47,000
Nonmfg. milit., naval (civilian).	1,200	33,000	34,000	34,000
Civilian population..............	3,196,465	3,236,601		

Employment: PITTSBURGH AREA

Counties included: Allegheny, Beaver, Washington, Westmoreland, Pa.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments........	565,000	685,000	670,000	665,000
Manufacturing..................	246,000	380,000	380,000	380,000
Other nonagric. estab..........	320,000	305,000	290,000	285,000
Selected industries				
Iron, steel and products.......	136,000	165,000	162,000	161,000
Electrical machinery...........	a/17,500	38,500	38,500	40,000
Machinery, except electrical...	a/11,600	27,000	27,000	27,000
Shipbuilding and repairs.......	a/700	22,700	25,000	22,700
Ordnance and accessories.......	—	20,900	19,900	22,000
Nonmfg. milit., naval (civilian)..	800	6,900	5,900	5,900
Civilian population..............	2,082,524	1,943,985		

a/ Estimated.

Employment: PORTLAND-VANCOUVER AREA

Counties included: Multnomah, Ore; Clark, Wash.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments.........	117,500	268,000	251,000	257,000
Manufacturing....................	30,500	164,000	150,000	154,000
Other nonagric. estab...........	87,000	104,000	101,000	103,000
Selected industries				
Transp. equip. incl. autos......	800	128,000	118,000	119,000
Nonmfg. milit., naval (civilian).	500	3,300	2,400	3,400
Civilian population...............	402,963	543,193	551,011[a]	

[a] Resident population of the area in May, 1944, according to a special census. Includes members of the armed forces living off post. Includes 197,708 persons who migrated into the area after April 1940.

Employment: PROVIDENCE AREA

Counties included: Providence, R. I.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments.........	175,000	219,000	209,000	203,000
Manufacturing....................	96,000	149,000	141,000	137,000
Other nonagric. estab...........	79,000	70,000	68,000	66,000
Selected industries				
Transp. equip. incl. autos......	300	19,300	19,600	18,800
Civilian population...............	550,298	522,209		

Employment: RICHMOND AREA

Includes: Chesterfield and Henrico Counties, and Richmond City, Va.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments.........	87,500	104,000	101,500	99,000
Manufacturing..................	29,500	34,000	33,500	33,000
Other nonagric. estab...........	58,000	70,000	68,000	66,000
Selected industries				
Tobacco manufactures............	a/10,700	10,900	9,400	9,500
Chemicals and nonferrous........	4,100	5,800	7,200	7,000
Nonmfg. milit.,naval (civilian).	---	7,700	7,500	7,500
Civilian population...............	266,185	282,089		

a/ Estimated.

Employment: ROCHESTER AREA

Counties included: Monroe, N. Y.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments.........	139,000	189,000	185,000	185,000
Manufacturing..................	69,000	122,000	119,000	120,000
Other nonagric. estab...........	70,000	67,000	66,000	65,000
Selected industries				
Scientific and photog. equip....	b/25,000	48,500	47,500	47,500
Electrical machinery............	b/4,100	17,600	19,200	19,600
Apparel, other fabr. text.......	9,500	9,800	9,600	9,600
Machinery, except electrical....	b/4,400	7,800	6,600	6,400
Ordnance and accessories........	---	4,100	3,500	3,500
Nonmfg. milit.,naval (civilian).	100	2,100	2,000	2,000
Civilian population...............	438,188	c/ 418,655		

a/ Adjusted to include workers commuting from other areas.
b/ Estimated.
c/ Local authorities have estimated a higher figure, approximately 429,000 for November 1943.

Employment: ST. LOUIS AREA

Includes: St. Louis City and St. Louis County, Mo., and Madison and St. Clair Counties, Ill.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	426,000	590,000	545,000	530,000
Manufacturing	171,000	320,000	280,000	280,000
Other nonagric. estab.	255,000	270,000	265,000	250,000
Selected industries				
Ordnance and accessories	---	76,000	48,000	48,000
Iron, steel and products	22,500	36,000	35,500	37,000
Machinery	18,400	35,000	38,000	35,500
Transp. equip. except autos	3,400	31,500	22,200	20,600
Leather and leather products	17,500	15,500	15,700	15,500
Nonmfg. milit., naval (civilian)	700	16,300	16,200	16,400
Civilian population	1,403,881	1,459,556		

Employment: SALT LAKE CITY AREA

Counties included: Salt Lake, Tooele, U.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	56,300	82,700	67,700	69,100
Manufacturing	10,300	22,700	11,700	12,100
Other nonagric. estab.	46,000	60,000	56,000	57,000
Selected industries				
Ordnance and machinery	400	11,900	1,100	900
Nonferrous metals and products	3,600	3,300	3,300	3,200
Nonmfg. milit., naval (civilian)	---	6,400	5,600	5,700
Civilian population	220,218	242,863		

Employment: SAN ANTONIO AREA

Counties included: Bexar, Tex.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments.........	68,900	109,800	103,100	102,400
Manufacturing..................	11,900	14,800	15,100	14,400
Other nonagric. estab...........	57,000	95,000	88,000	88,000
Selected industries				
Nonmfg. milit., naval (civilian).	2,900	34,500	29,000	29,000
Civilian population..............	315,800	364,275		

Employment: SAN DIEGO AREA

Counties included: San Diego, Calif.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments.........	61,800	153,000	144,000	138,000
Manufacturing..................	12,300	67,000	61,000	55,000
Other nonagric. estab...........	49,500	86,000	83,000	83,000
Selected industries				
Transp. equip. incl. autos......	6,100	60,000	55,000	48,000
Nonmfg. milit., naval (civilian).	2,500	13,900	15,900	17,000
Civilian population..............	276,079	394,569	415,875 [a]	

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a/ Resident population in March 1944, according to a special census. Includes 23,685 members of the armed forces living off post. Includes 164,985 persons who migrated into the area after April 1940.

Employment: SAN FRANCISCO BAY AREA

Counties included: Alameda, Contra Costa, Marin, San Francisco, San Mateo, Calif.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	445,000	770,000	745,000	755,000
Manufacturing	115,000	345,000	310,000	320,000
Other nonagric. estab.	330,000	425,000	435,000	435,000
Selected industries				
Transp. equip. except autos	4,800	210,000	177,000	166,000
Nonmfg. milit., naval (civilian)	1,900	51,000	55,000	60,000
Civilian population	1,400,226	1,727,369	a/ 1,737,050	

a/ Resident population in April 1944, according to a special census. Includes approximately 33,000 members of the armed forces living off military and naval reservations. Includes 500,000 persons who migrated into the area after April, 1940.

Note on classification: Employment at Hunter's Point Navy Yard is included in manufacturing. Other War and Navy Department employment is included in "Nonmfg. military, naval."

Employment: SEATTLE-TACOMA AREA

Counties included: King, Kitsap, Pierce, Wash.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	201,000	385,000	369,000	368,000
Manufacturing	61,000	195,000	186,000	183,000
Other nonagric. estab.	140,000	190,000	183,000	185,000
Selected industries				
Shipbuilding and repairs	a/8,000	92,000	87,000	81,000
Other transp. equip. incl. autos	a/6,300	40,500	41,500	43,000
Iron, steel and products	4,300	9,600	9,200	9,400
Nonmfg. milit., naval (civilian)	1,400	25,500	25,000	26,500
Civilian population	719,662	895,510	b/ 901,332	

a/ Estimated.

b/ Resident population of the area in June, 1944, according to a special census. Includes members of the armed forces living off post.

Employment: SOUTH BEND AREA

Counties included: St. Joseph, Ind.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	48,700	74,900	74,200	71,800
Manufacturing	27,000	53,000	53,000	51,000
Other nonagric. estab	21,700	21,900	21,200	20,800
Selected industries				
Aircraft, autos and parts	11,300	31,500	32,500	31,000
Machinery	5,000	6,800	6,600	6,600
Civilian population	161,823	173,111		

Employment: SPOKANE AREA

Counties included: Spokane, Wash.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	41,300	59,000	57,500	56,800
Manufacturing	8,300	13,000	13,000	11,800
Other nonagric. estab	33,000	46,000	44,500	45,000
Selected industries				
Nonferrous metals and products	100	4,400	4,700	3,400
Nonmfg. milit., naval (civilian)	---	9,800	9,700	10,400
Civilian population	162,620	172,352		

Employment: SPRINGFIELD-HOLYOKE AREA

Counties included: Hampden, Mass.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	103,000	150,000	142,000	139,000
Manufacturing	51,000	100,000	93,000	90,000
Other nonagric. estab	52,000	50,000	49,000	49,000
Selected industries				
Ordnance and accessories	a/3,600	34,000	29,500	19,500
Machinery	10,700	20,600	20,600	28,000
Civilian population	332,048	321,299		

a/ Estimated.

Employment: SYRACUSE AREA

Counties included: Onondaga, N. Y.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	84,000	115,000	109,000	109,000
Manufacturing	34,500	62,000	58,000	58,000
Other nonagric. estab	49,500	53,000	51,000	51,000
Selected industries				
Electrical machinery	a/1,800	14,600	9,300	9,200
Ordnance and accessories	---	9,300	9,900	10,400
Iron, steel and products	6,700	8,200	8,200	7,800
Machinery, except electrical	a/7,000	7,500	8,800	8,900
Nonmfg. milit., naval (civilian)	---	2,600	2,200	2,200
Civilian population	295,108	283,237		

a/ Estimated.

Employment: TAMPA AREA

Counties included: Hillsborough, Fla.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	43,600	74,500	70,500	63,500
Manufacturing	15,100	37,000	34,000	30,500
Other nonagric. estab	28,500	37,500	36,500	33,000
Selected industries				
Shipbuilding and repairs	a/1,400	22,300	19,000	17,200
Tobacco manufactures	a/6,400	7,000	6,600	6,200
Nonmfg. milit., naval (civilian)	100	4,300	4,600	4,600
Civilian population	180,148	201,987		

a/ Estimated.

Employment: TOLEDO AREA

Counties included: Lucas, O.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	98,000	141,000	141,000	139,000
Manufacturing	42,000	84,000	85,000	84,000
Other nonagric. estab	56,000	57,000	56,000	55,000
Selected industries				
Aircraft, autos and parts	a/10,400	20,600	22,000	22,200
Machinery	7,500	20,600	19,900	19,300
Ordnance and accessories	----	8,100	8,400	8,700
Stone, clay, glass products	5,000	7,000	7,200	7,300
Civilian population	344,333	336,396		

a/ Estimated.

Employment: TRENTON AREA

Counties included: Mercer, N. J.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	62,500	74,500	72,900	72,000
Manufacturing	29,000	49,000	48,000	47,000
Other nonagric. estab	33,500	25,500	24,900	25,000
Selected industries				
Aircraft, autos and parts	a/2,200	14,900	14,800	14,000
Machinery	3,000	9,200	9,300	9,200
Iron, steel and products	5,000	5,400	5,100	5,200
Rubber products	a/3,400	4,500	4,500	4,500
Civilian population	197,318	196,424		

a/ Estimated.

Employment: TULSA AREA

Counties included: Tulsa, Okla.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	50,500	86,700	76,500	76,000
Manufacturing	11,000	42,200	34,000	33,000
Other nonagric. estab	39,500	44,500	42,500	43,000
Selected industries				
Aircraft, ordnance and machinery	a/1,800	30,000	21,700	23,100
Petroleum and coal products	2,700	4,400	4,300	2,400
Civilian population	193,363	213,200		

a/ Estimated.

Employment: UTICA-ROME AREA

Counties included: Herkimer, Oneida, N. Y.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments..........	73,000	101,500	95,000	93,000
Manufacturing....................	39,000	60,000	55,000	53,000
Other nonagric. estab............	34,000	41,500	40,000	40,000
Selected industries				
Ordnance and accessories..........	a/2,100	16,200	12,000	10,600
Machinery.........................	3,400	8,500	9,200	9,400
Nonferrous metals and products....	6,500	8,400	8,000	5,700
Iron, steel and products..........	a/2,400	2,800	3,000	5,200
Nonmfg. milit., naval (civilian)...	---	9,700	8,800	8,900
Civilian population.................	263,163	258,433		

a/ Estimated.

Employment: WASHINGTON, D. C. AREA

Includes: District of Columbia; Arlington County and Alexandria City, Va; Montgomery and Prince Georges Counties, Md.

Type of Employment	April 1940 a/	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments.........	347,000	489,000	480,000	474,500
Manufacturing...................	27,000	49,000	50,000	49,500
Other nonagric. estab...........	320,000	440,000	430,000	425,000
Selected industries				
Ordnance and accessories........	9,300	26,500	27,000	26,000
Nonmfg. milit., naval (civilian).	10,100	74,000	74,000	75,000
Other government................	122,000	182,000	177,000	176,000
Civilian population...............	919,632	1,175,384		

a/ 1940 Census employment figures were adjusted to accord with Civil Service Commission data on government.

Note on classification: Employment at the Navy Yard and the Naval Torpedo Station is included in manufacturing. Other War and Navy Department employment is included in "Nonmanufacturing, military, naval." Publicly operated schools and hospitals are included here, as in other areas, among "Other nonagricultural establishments" and the remainder of federal and local government employment is entered as "Other government."

Employment: WICHITA AREA

Counties included: Sedgwick, Kans.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	37,700	95,000	93,000	90,000
Manufacturing	8,700	58,000	56,000	54,000
Other nonagric. estab.	29,000	37,000	37,000	36,000
Selected industries				
Aircraft, parts and machinery	a/2,100	49,500	48,500	46,500
Civilian population	143,311	194,945		

a/ Estimated.

Employment: WILMINGTON AREA

Counties included: New Castle, Del.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	55,700	77,000	76,000	74,500
Manufacturing	23,700	47,500	46,000	45,500
Other nonagric. estab.	32,000	29,500	30,000	29,000
Selected industries				
Transp. equip. incl. autos	2,000	16,900	15,400	15,700
Chemicals and allied products	8,400	13,300	13,300	13,200
Iron, steel and products	1,900	3,800	3,700	3,500
Nonmfg. milit., naval (civilian)	---	1,100	1,400	1,400
Civilian population	178,483	189,532		

Employment: WORCESTER AREA

Counties included: Worcester, Mass.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	154,000	187,000	179,000	175,000
Manufacturing	91,000	131,000	124,000	121,000
Other nonagric. estab	63,000	56,000	55,000	54,000
Selected industries				
Machinery	13,100	27,500	25,500	24,700
Iron, steel and products	15,000	18,200	17,400	19,800
Stone, clay, glass products	3,000	11,400	9,500	9,000
Civilian population	503,481	472,224		

Employment: YOUNGSTOWN AREA

Counties included: Mahoning, Trumbull, O; Lawrence, Mercer, Pa.

Type of Employment	April 1940	Nov. 1943	May 1944	Sept. 1944
Civilian employment in nonagric. establishments	143,000	192,000	193,000	190,000
Manufacturing	81,000	128,000	129,000	127,000
Other nonagric. estab	62,000	64,000	64,000	63,000
Selected industries				
Iron, steel and products	55,000	68,000	66,000	64,000
Electrical machinery	a/6,500	13,800	14,500	15,100
Machinery, except electrical	a/3,000	11,500	9,800	9,500
Ordnance and accessories	---	5,700	5,300	6,500
Civilian population	570,482	557,428		

a/ Estimated.

November 8, 1951

WAR INDUSTRY FILES IN STATISTICAL BRANCH

I. War Industry Plant Schedules
  - Filed alphabetically by state and region

II. Community Studies
  - Filed alphabetically by state and region

III. Source Books
  - From Plant Schedules
    - Old Source Book
    - General Source Book
    - Special Industry Source Books on -
      - Aircraft Engines and Engine Parts
      - Foundries (Bulletin No. 1927)
      - Iron and Steel (Bulletin No. 192-5)
      - Ordnance and Quartermaster Depots Bulletin No. 192-8
      - Paper and Paper Products
      - Railroads
      - Shipbuilding (Bulletin No. 192-6)
      - Sugar Refining (Bulletin No. 192-9)
  - From Community Surveys (Filed in drawer with community surveys)

NOTE: Source Books were prepared by assembling under subject matter and industry the material reported on the various schedules.

Old Source Book - dates approximately 12/41 - 8/43
General Source Book - dates approximately 8/43 - end of year
Special Industry Source Books - dates approximately 1/43 - 9/44
Community Source Books - dates approximately 2/43 - 11/43

STATUS OF WOMEN IN Industry

Second Section Nat'l Sec **THE CH**

Christian Science Monitor
Feb. 3, 1943

MVR

Intimate Message: Washington

Have Women Reached 'Full Stature'? .... *By Mary Hornaday*

This is a brazen sequel to the gentlemanly article by Managing Editor Erwin D. Canham in the Jan. 26 issue of the Monitor in which he concludes:

"In the long years ahead, we will remember these short years of ordeal as the period when women rose to full stature."*

It's these words "full stature," I'm questioning.

It is true that women now have opportunities to hold many more kinds of jobs than they have ever had in the United States before. By the end of the year there will be nearly 6,000,000 women in war industries. Women and men above draft age will have practically taken over the civilian industries. Women are already driving busses, delivering laundry and jerking sodas.

Numerically women are way out ahead in this war, but will they get the opportunities necessary for developing to their "full stature"?

It is right for women entering industry to start at the bottom. The jobs they are doing in airplane factories and munitions plants are chiefly the most simple, routine jobs in the industry. Jobs that require skills are being broken down into simple operations so "green" women can handle them. A few women are doing outstanding work in engineering and chemistry but these are not numerous because, during the 10 years of the depression, women were advised to stay away from such professions and leave them to the breadwinners of the family.

Plenty of Bouquets

No one doubts that women as a whole are making good at the jobs to which they have been assigned. Listen, for instance, to a letter I received recently from the Moore Dry Dock Company of Oakland, Calif., whose shipyard I visited last summer.

"Here at Moore Dry Dock Company women have been employed in rapidly increasing numbers and they are making good in a big way," says this progress report. "They certainly have proved their worth in this industry and have won the respect and confidence of their supervisors and the men with whom they work in the hulls, in the assembly yards, in the shops and on the ways."

One of the chief unions at the Moore Company, as at other shipyards, is the Boilermakers Union of America which recently received women into its membership for the first time.

But admission of women into the union still didn't mean equality of opportunity for women to advance in their jobs. The War Manpower Commission has in its files a Seattle woman boilermaker's account of her first union meeting to which she went bent on airing her grievances about the injustices of the upgrading system within the union.

Experience in a Union

With "courtesy befitting a duchess" she was told by chivalrous union leaders that in order to qualify as a "trainee" and eventual "fitter" she would have to be able to do all the work of a fitter which at the present time includes going down into the small section of the ship's hull where dangerous gases sometimes accumulate.

"Many times when a fitter is overcome by gases, his fellow worker will grab him out," a union spokesman explained. "We know that a man would hesitate before doing that to a woman. That hesitation might mean the life of one of you women."

Why not correct the danger instead of barring women?

"Equal pay for equal work" has significantly been proclaimed to be the wage policy of the land in World War II, but are women's wages being upgraded to meet men's? In some places, yes. In most places, no.

Women, as a whole, probably will not fight for salary raises as vigorously as do men, but they will not attain their "full stature" until they are able to get the wherewithal to travel and educate themselves and to broaden their viewpoint.

Women in business are not the only ones who will have to guard their opportunities to achieve "full stature." Though the housewife is now a key person in the nation's food and rationing program, she has no voice in the councils where such programs are planned. Indirectly she will be consulted, through the OCD's "block" plan as to her family's food habits, but there are thousands of thinking women over the country unable to join the Waacs and Waves who feel that they still have not been given a worthwhile war job of any kind to do.

Perhaps woman's role is still primarily "behind-the-scenes" and her present big-scale venture into business life is only proof that her biggest asset is her adaptability to any kind of life.

At any rate it looks as if women—as well as men—will still have to go on seeking their "full stature" even after women get their 6,000,000 war jobs.

(*May a mere man suggest that Miss Hornaday's article is one good proof of the way women are rising to full stature? And a useful reminder of pitfalls along the way, of safeguards we must provide? E. D. C.)

EBRUARY 3, 1943

d Decoration

day

A career woman's haircut, styled by Guro to form a frame for this type of face. The slight indication of bangs is new. No bobby pins or hairpins are necessary with this cut.

Fix Spare Room For War Worker

By Bernice Stevens

Written for The Christian Science Monitor

Do you have a spare room or two in your house not in use? If so, and if you live in any center of war activity (either industrial or military), you will be doing a real patriotic service by renting it for the duration. By doing so you can help provide a home for a young Army or Navy officer, a war bride and her sailor or soldier husband, a war bride alone, or a man or woman defense worker.

Whether it is a bare storeroom in the attic, or a guest room (now unused because people don't travel much any more), make it cheerful and homelike. Just a bed and four walls isn't quite enough if we are

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Women's Republican Clubs Urge Postwar Planning Study

Special to The Christian Science Monitor

CHICAGO — Looking to the greater influence women will have in the 1944 elections, the National Federation of Women's Republican Clubs is directing the attention of its members to the study and consideration of postwar planning during 1943.

The study program, as outlined by the Advisory Board, which met in executive session here recently, will include peace proposals, all plans for world reorganization, and the potential problems of the reconstruction period. The 3,600 study clubs in 39 states are being asked to establish special committees to conduct the study program.

In discussing the recommended study as one feature of its 1943-1944 program, Mrs. Ann Scott Wilson, of Huntington, West Virginia, Federation first vice-president, and chairman of the program committee, stated "No topic within the memory of present-day women voters calls for more intelligent handling than the formation of peace outlines and the solution of the critical postwar problems. Women must be equipped to contribute realistically to the molding of public opinion. They must weigh all recommendations, they must be prepared to lend an intelligent influence to the debates and negotiations incident to the drafting of a sound Allied peace program."

Pointing to the fact that the thoughtful judgment of American women must be felt at the peace table, Mrs. Wilson stated this study program is aimed at crystallizing their ideas as to the policies to be decided there.

Outvoted the Men

As evidence of this growing influence of American women in all elections, she cited the November voting records when in many areas women outvoted the men anywhere from 52% to 65%. "This is due not only to the fact that so many men are away from home serving in the armed forces, but because women are more interested in affairs of their nation. They have a grave responsibility in 1943 in keeping themselves posted on what is going on, so that they will be ready to vote properly in 1944."

The Federation is also asking for more public support of the policy of "Equal pay for women's work, or the identical rate for the job." While recognizing that some employers, labor unions, and governmental agencies have indorsed the equality-in-pay principle, the Advisory Board declared that there is still a wide gap in the general adoption of adequate wage standards for women. Summing up the Board's action, Mrs. Louis Leach, of St. Paul, Federation treasurer, said, "While the equal-pay-for-women policy has always been a meritorious one, it is even more pressing today. In addition to the great influx of women workers in all employment, there will be at least 6,000,000 women in war production this year. Their aptitude for war occupations already has made its mark in production totals, and there should be no questioning of the equalization of women's wages with men, for the comparable quality and quantity of work.

Equal Wage Effort

"Some progress has been made in this effort for equal wage rates, notably in recommendations of the War Labor Board, in union agreements, and in employers' action. There is, however, a wide gap between the declared principle and its general adoption. This policy is essential in the building of women's industrial stability and one which we wholeheartedly approve."

The meeting was not without its criticisms of the present administration. In a formal statement reflecting action taken by the National Democratic Committee here Jan. 18, the members of the Board denounced what they described as the excessive bureaucratic tendencies of the administration and the rapidly mounting number of employees on the Federal pay roll. The formal statement reads, "The New Deal Administration's penchant for bureaucratic methods has placed nearly three million civilians in the executive branch of the Federal Government. It is true many additional employees were needed for the handling of the war program, but certainly not in the proportion to the personnel additions which are being made in many governmental agencies."

The Gentler Sex

By Malvina Lindsay

On Bossing Women

Why doesn't the average factory foreman want women around?

Secretary of Labor Frances Perkins threw the question to newspaper women during her address before the Women's National Press Club. "Solve it if you can," she said. The Secretary went on to say that while women employes usually won the industrial foreman over by their work performance, they nevertheless faced his initial prejudice. Why was this?

Accepting the challenge, this column conjectures that the average factory foreman doesn't want—or thinks he doesn't want—women workers because:

Such strange beings have never worked in his factory before; they represent the unknown and the new (always doubly perilous in its feminine aspects); they will upset the nice comfortable old regime that has been plenty good so far.

As soon as a woman employe gets any good, she will up and leave to marry, to have a baby, to follow her husband somewhere, or to have a rest or a nervous breakdown;

His style will be cramped in bawling out those who need it, and when he does, the woman victim will not take it like a man and then get over it, but will pout around for days;

Both he and his men will have to be more careful about swearing and kidding and going around in their undershirts (or even without), and will have to shave and wash behind the ears oftener;

Women won't bear their share of the load and will expect masculine chivalry to take up the slack;

His men workers will be distracted by having the place populated with females, all of whom will be Lana Turners, or at least Mae Wests.

He expects (judging from his home experience) to have some woman employe always telling him that her sinus is bothering her or that she is terribly nervous, or ought to have an operation, or that she simply has too much at home to do and can't do her shopping because there are no cotton blouses or potatoes.

He fully believes all the women workers will be constantly clawing each other's eyes out, or at least engaging in what men call "cat fights" when applied to women, and "differences of opinion" when applied to themselves;

He fears the women will be having upsetting ideas about things, wanting to change the machinery around, try out simpler methods and short cuts (and indeed that is quite likely, says Secretary Perkins), and asking questions why this or that isn't done;

He foresees that they will make an uproar over the small, dirty, mice-infested wash and rest rooms and want to do something about the ventilation and the lights;

Being women, they are bound to be jealous of one another and continually backbiting and undercutting each other;

He fears—in fact he knows—they will talk too much, and probably do plenty of talking about him;

In any conflict with them, he knows they will use baffling secret feminine weapons, against which he will feel helpless;

He senses—and possibly rightly—that "managing" a woman employe will take more out of him than managing half a dozen men;

He unconsciously sees in them his policeman, his mentor, his antagonist of the ages — woman trailing him to his last refuge; woman, against whom in his savage days he used charms and ceremonies to insulate and immunize himself; woman who as his mother bound her to him through his helplessness and never entirely let him go; woman, who as his teacher, bossed, nagged and improved him; woman, who as his sweetheart, overpowered him and tamed him and nipped his eagle adventuring; woman, who as his wife, domesticated him and managed him; woman, who through the years has been gradually shearing him of his power, his authority, his freedom and who has been following him around, making him wash and behave and stay home; woman, who has been crowding further into his life with her demands, her help—yes, and her understanding; woman, whom he cannot fathom or escape; woman, who is his universal danger and his universal need.